FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

OCTOBER, 1953

OCT 1953
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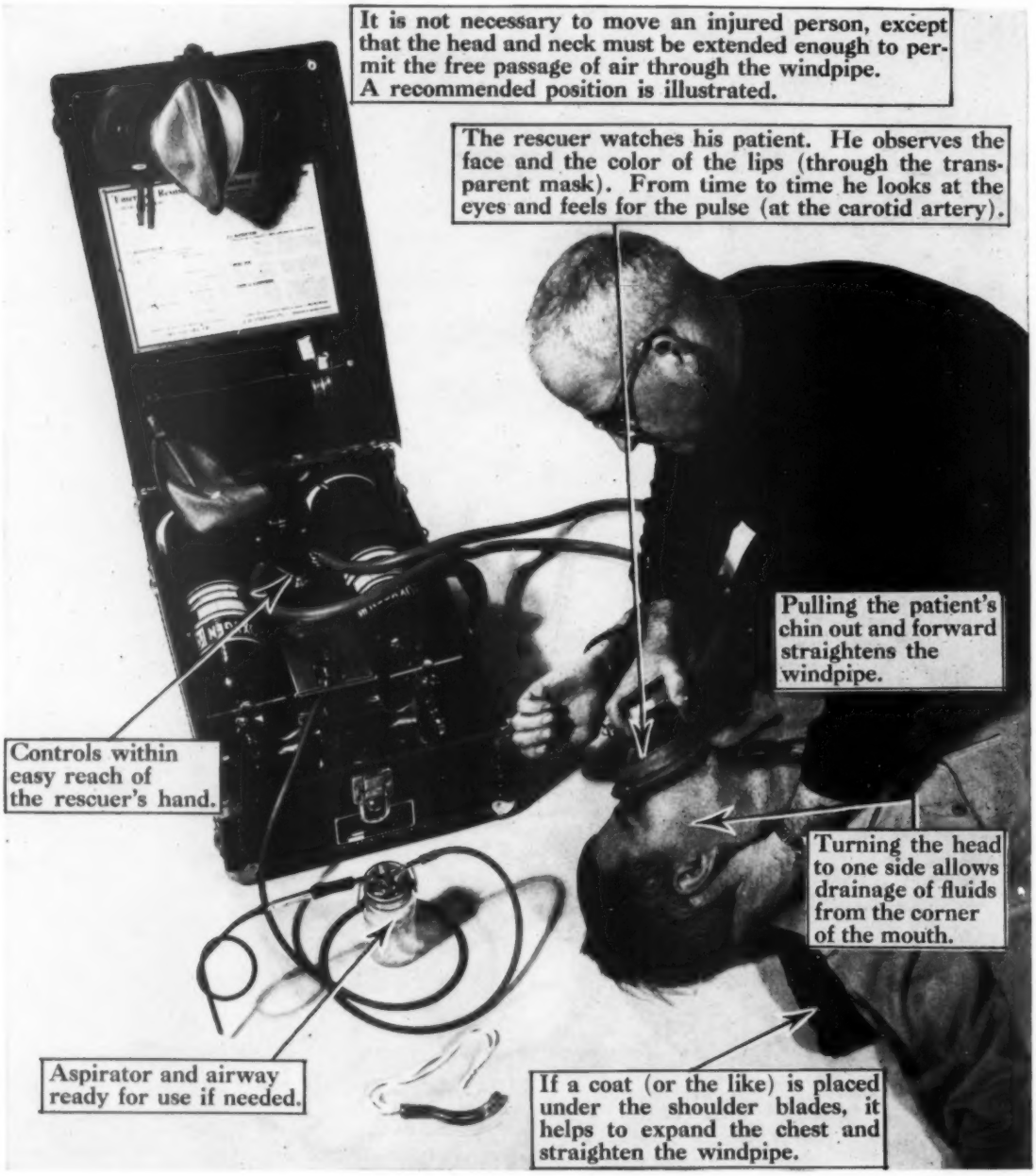
Metal aerial served well in getting stream on top of fire which involved large Cincinnati store recently.

A CASE SHEPPERD MANN PUBLICATION

New .... Illustrated Booklet on Resuscitation

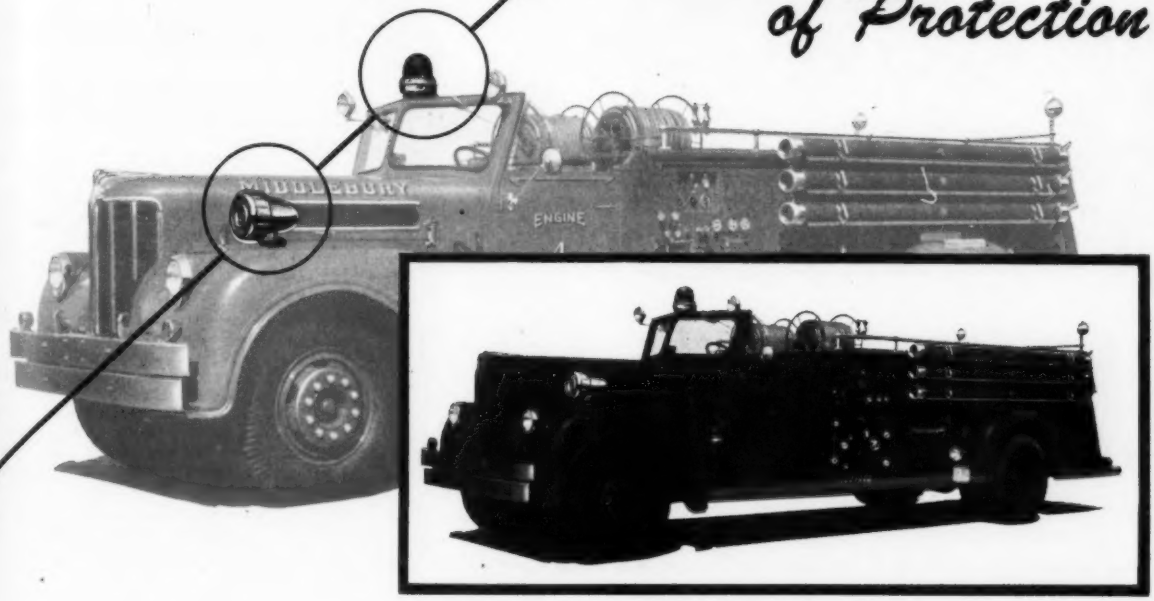

It is not necessary to move an injured person, except that the head and neck must be extended enough to permit the free passage of air through the windpipe. A recommended position is illustrated.
The rescuer watches his patient. He observes the face and the color of the lips (through the transparent mask). From time to time he looks at the eyes and feels for the pulse (at the carotid artery).
Pulling the patient's chin out and forward straightens the windpipe.
Controls within easy reach of the rescuer's hand.
Turning the head to one side allows drainage of fluids from the corner of the mouth.
Aspirator and airway ready for use if needed.
If a coat (or the like) is placed under the shoulder blades, it helps to expand the chest and straighten the windpipe.

If you use an Emerson
write at the earliest opportunity
for your copy
with the compliments of

J. H. EMERSON COMPANY

82 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS

FEDERAL STANDARD *of Protection*



This 750 gallon pumper was built by Maxim Motor Co. of Middleboro, Mass. It is equipped with two-way radio and has a 1000 gallon water tank all protected by a FEDERAL BEACON RAY LIGHT over the windshield and a FEDERAL "Q2A" SIREN on the fender.

Federal Warning Signals are accepted as the STANDARD OF PROTECTION throughout the United States. The smart customer who specifies a Federal Beacon Ray Light and Federal "Q" Siren for his apparatus is further borne out in his choice by the outstanding manufacturer who specifies Federal warning signals. It's just good common sense to insist that this precious and vital piece of equipment be protected every step of the way by the very finest warning signals you can buy anywhere.

The famous Beacon Ray's flashing red light gives a warning to every point of the compass — 360°, commanding instant alertness against possible collision, even when standing still.

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Write today for information about this "perfect pair" of warning signals by FEDERAL.

FEDERAL ENTERPRISES, Inc.

Formerly, Federal Electric Company, Inc.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

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MEMBER
Audit Bureau of Circulations
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Visions and Realities

"The vision of things to be done may come a long time before the way of doing them appears clear, but woe to him who distrusts the vision."

JENKIN LLOYD JONES

LOOKING back over 75 years through the pages of Fire Engineering, we are struck by the repeated prophecies of newer, better, safer ways to combat fire.

● The gasoline driven fire engine . . . the power driven aerial ladder—and the all-metal, one-man-operated aerial . . . automatic fire detection and extinguishing systems . . . two-way radio . . . water fog and wet water—these and other "innovations" of the fire service were once only visions to a pitifully few pioneers of that service. But they, like Fire Engineering, never distrusted the visions and pursued them to reality.

● The editorial and advertising columns of Fire Engineering today continue to picture and portray the products, plans and procedures that yesterday were only somebody's dreams—somebody's visions. That is a pioneering duty the publishers of this Journal believe they owe to the fire service to further its forward progress.

● No other single issue ever so demonstrated this point as the September IAFC Conference number. It was largest in size . . . had the greatest press run . . . contained the greatest number of advertising pages, of any fire journal ever published. In every way, it fulfills a vision of things to come—and recounts the progress that has been achieved in and by the nation's fire service.

The Publishers

FIRE ENGINEERING

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"Specialized Leadership"

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IN

PERFORMANCE

QUALITY SERVICE

FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

IN CANADA BICKLE-SEAGRAVE, LTD. WOODSTOCK, ONTARIO

NEW WARD LA FRANCE PUMPER was recently delivered to East Providence, largest U.S. town operating under town meeting system. Standing beside pumper are Francis J. Erkman, left, Chairman of town's Fire Committee, and I. A. Ballou, Jr., New England Agent for Ward LaFrance.

Ward La France protects East Providence, R.I.

Under council president James J. Reilly, East Providence, R.I. has in 2 years time laid over 150,000 feet of new water main . . . built an addition to its central fire station . . . added many men to its personnel . . . and is now building its sixth fire station. This town of 40,000 also has built a five million-dollar high school and an extensive sewer system.

Like so many communities, East Providence relies on Ward LaFrance for fire protection. The pumper, above, is the second new Ward LaFrance pumper delivered to East Providence in the past 2 years.

MODERNIZE YOUR COMMUNITY with ruggedly-built Ward LaFrance apparatus. Time-tested Ward LaFrance pumpers have performed under all kinds of fire-fighting conditions for over 30 years. They're available in 130, 150, 200 and 240 H.P., ready to deliver the weight-to-horsepower ratio that hill-climbing and fast get-aways demand. They come equipped with Waterous split housing pump . . . surplus gallonage far exceeding rated capacity . . . flat horizontal booster tank . . . exceptional hose capacity and other outstanding features.

Talk to the Ward LaFrance representative in your area. He'll help you select the right equipment for your community.

NEW ENGLAND AGENT
Ira A. Ballou, Jr.
Corner Dover and Allerton Ave.
East Providence 14, R.I.

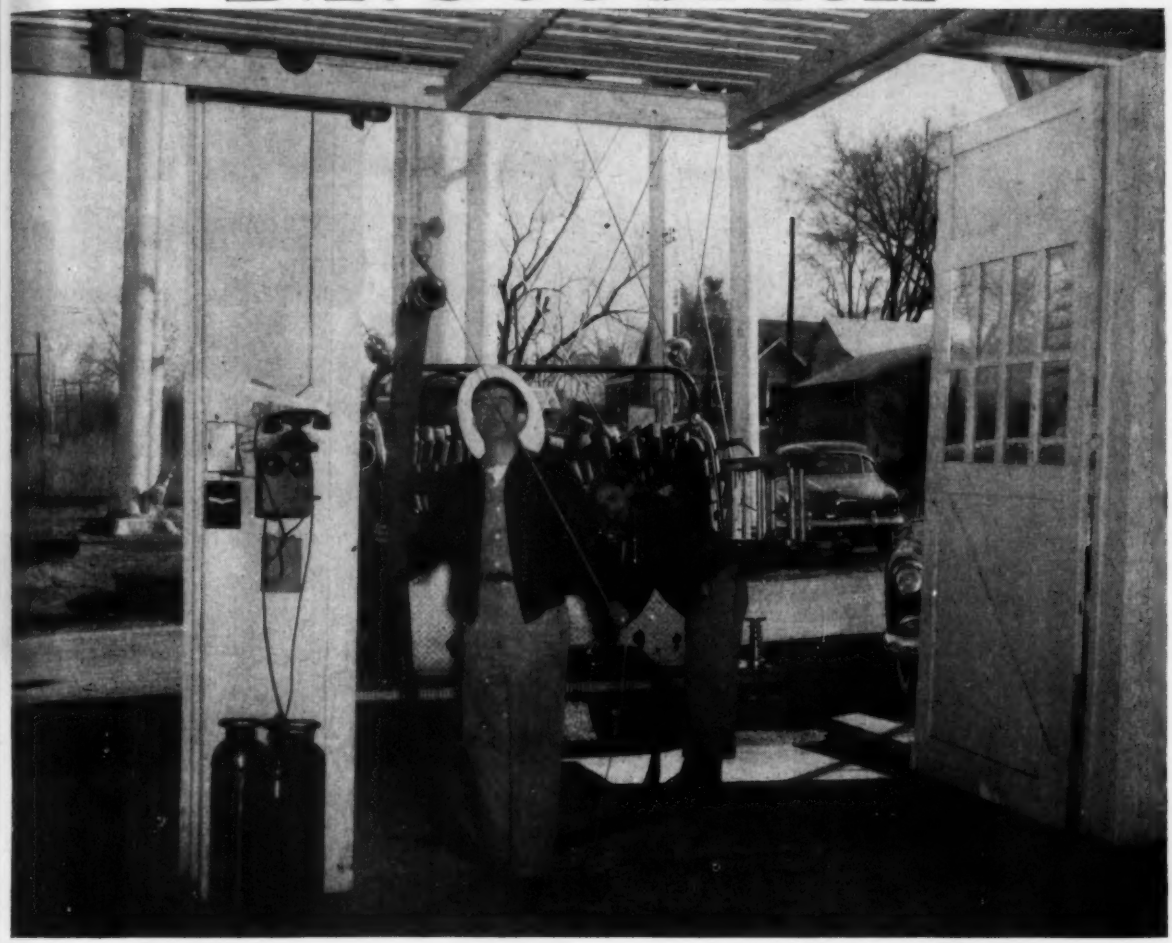
WARD LaFRANCE
TRUCK CORPORATION
Fire Apparatus Manufacturers for over 30 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue, Elmira, N.Y. Tel. 3-5631

DIRECT FACTORY BRANCH: 139th Street & Bruckner Blvd., New York 54, N.Y. Tel. CYpress 2-3300

EXPORT: Ward LaFrance International, Inc., Elmira, N.Y., U.S.A. Cable Address: "Wardtruck"

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER



Lost—50 feet of fire hose Found—a brand-new customer

CHIEF ARTHUR FULLER (at left, above), of the Huntingdon, Tennessee Fire Department tells this story.

A department from a neighboring town was called on for help by Huntingdon. When the out-of-towners returned to their station, they found they had picked up 50 feet of B. F. Goodrich Fire King hose belonging to the Huntingdon department. They were so impressed with Fire King, *they ordered 1500 feet for themselves!*

The use of a chemically-produced fiber makes the popular Fire King 15% lighter than other hose, more flexible and easier to handle at a fire *and* when racking it back at the station. This fiber, found in B. F. Goodrich hose, is used as "filler cords"—the cords that go *around* the hose and carry the load under pressure.

Though much lighter, B. F. Goodrich Fire King is *far stronger*. Actual service tests prove that Fire King, tested to 600 pounds pressure, is *50% stronger* than standard hose, which is tested to only 400 pounds.

Having tried many other makes of hose in action, Chief Fuller says that B. F. Goodrich Fire King handles better and will outlast *any* hose. We think you'll agree, once you compare Fire King with the hose you now use. A BFG Fire Hose Distributor will be glad to bring you a sample, and quote on your requirements.

The B. F. Goodrich Company
Dept. M-66, Akron 18, Ohio

Without cost or obligation, please

☐ send me more information on B. F. Goodrich fire hose.

☐ have a BFG Fire Hose Distributor see me.

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Department_____

Address_____

City_____ Zone_____

State_____

Fire Hose BY **B.F.Goodrich**

for RUGGED DUTY!

MIDWESTERN PROTECTIVE CLOTHING

The overwhelming preference for Midwestern Protective Clothing is the result of outstanding performance when the going is tough and the chips are down. The superior quality, design, fabric texture and many exclusive features found in Mackinaw Coats and other Midwestern garments help increase your department's efficiency and provide extra protection for your men at the scene of the blaze. There is no substitute for the expert workmanship, built-in comfort and longer wear you get by specifying Midwestern.

PROTECTION—COMFORT—SERVICE

You will find the type of fabric exactly suited to your needs in our wide selection of rubber materials. You can absolutely depend on the softness and flexibility of these high grade materials to meet your most exacting requirements for lasting comfort, rugged service and greater efficiency on the job.

For complete information on our full line of firemen's protective clothing, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

Aim toward faster, more efficient fire fighting with back-pack INDIANS . . . the all round, clear water extinguishers with hundreds of uses. No upkeep cost. No chemicals to buy. Read what this fire chief says.

"We consider Indian Fire Pumps one of the most important pieces of equipment in our company. Just two days ago we saved a Dry Goods store and several other buildings with small water damage by using Indians.

Indians play a large part in extinguishing many of our fires and we intend to get more in the near future."

J. S. Williams

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stronger, more flexible hose made with

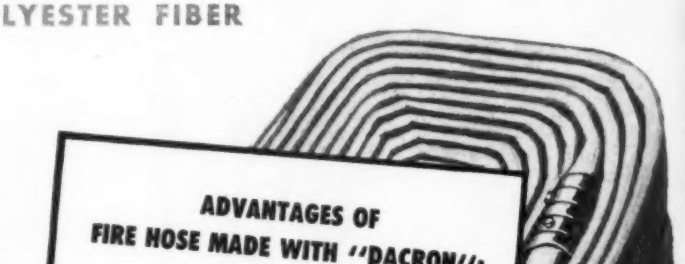
DACRON*

POLYESTER FIBER

It's lighter to carry... gets into action faster

Fire hose that's lighter and more flexible . . . easier to handle . . . yet stronger than ordinary hose of the same diameter! That's the news "Dacron" polyester fiber has made possible. "Dacron" is used as the load-carrying "filling" cord that reinforces the hose. The exceptional strength of this famous man-made fiber, plus its lightness and flexibility, results in a hose that offers strength without bulk . . . that's at least 15% lighter . . . easy to coil and uncoil.

More than two years of field testing have proved the advantages of this new hose in action. It will soon be available in volume. Plan now to take advantage of the performance extras that "Dacron" gives to fire hose. Before you place your next order, be sure to ask your supplier about hose made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Dept., Wilmington 98, Del. *REG. U.S. PAT. OFF.



DACRON polyester fiber

DU PONT
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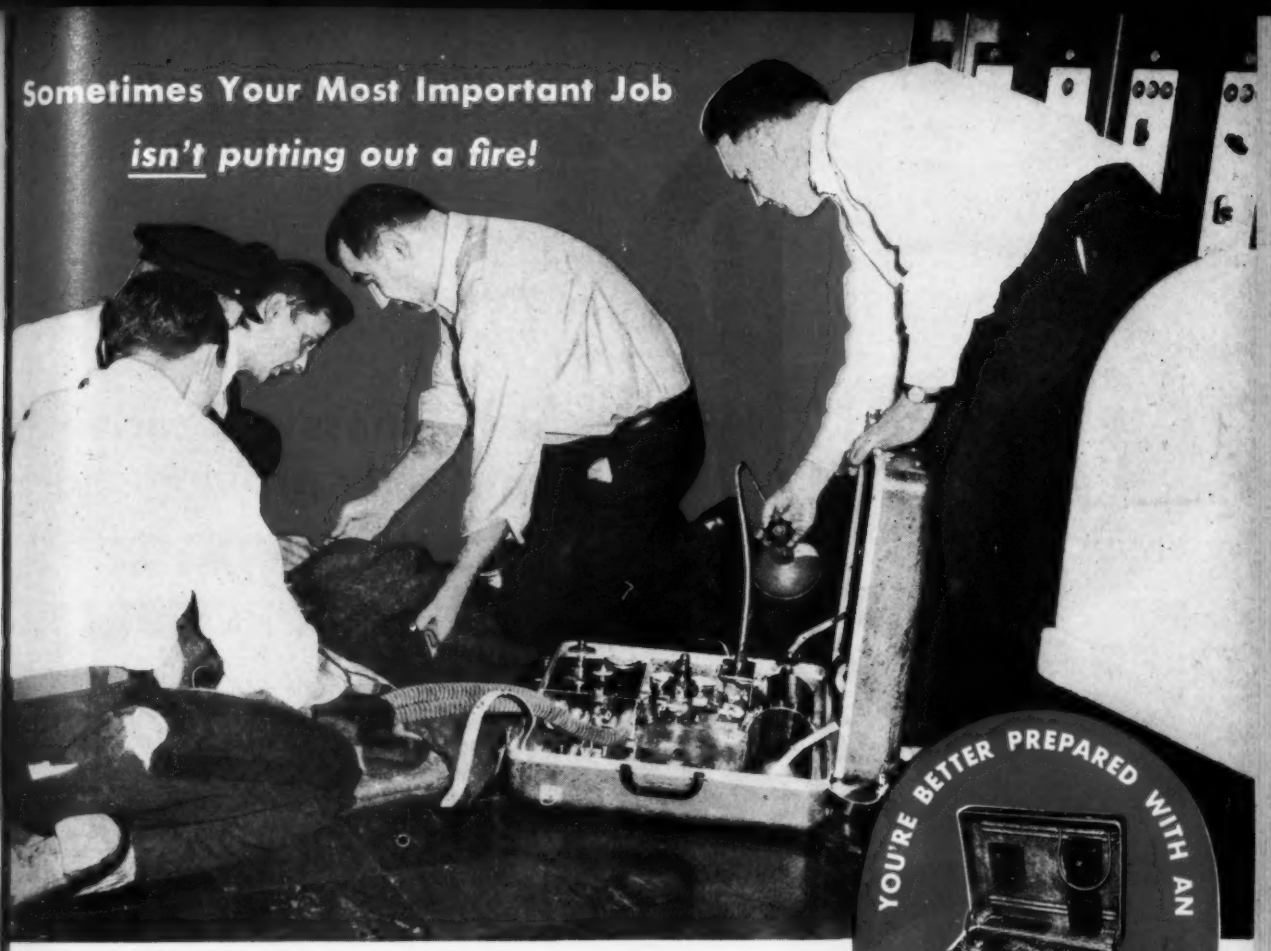
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



There's a little boy laughing and playing around his Cleveland home today because of an unusual life-saving team of a truck driver—two quick-thinking patrolmen—the Shaker Heights fire department rescue squad—and an M.S.A. Pneolator.

This three-year-old, playing on the bank of a creek, slipped and fell in, striking his head on a rock. Unable to get up, he lay submerged while the icy water drained away his life and strength. A truck driver pulled him out, and called a radio patrol car. During the rush to the hospital, the boy lost consciousness, and his body stiffened. It seemed that the end of the story would be written by "D.O.A."

Then the two patrolmen made a decision that was credited with saving the boy's life. They knew of a new piece of life-saving equipment at the fire station, and speeded there. Captain Stanley Nethery, Lieutenant Ronald Kral and the members of the trained rescue squad manned the M.S.A. Pneolator, that administered automatic artificial respiration, and fed life-giving oxygen into the youngster's lungs. After 34 tense, anxious minutes the boy stirred and sobbed. Twenty-four hours in the hospital completed the cure. The lad went home. And another glowing entry was written into the day book of history that records the heroism, the resourcefulness, and the countless deeds of unselfish public service of American firemen.

The M.S.A. Pneolator is the newest development in mechanical artificial respiration equipment, and assures maximum chance for survival in every case of arrested breathing. Oxygen supply is immediately adaptable to the age and physical condition of the patient. Elimination of the "suction" phase of the breathing cycle bans danger of aggravating lung tissue injury. Inhalator action for smoke treatment. Ask for Bulletin No. CH-2.

Call the M. S. A. man on your every safety problem . . . his job is to help you

MINE SAFETY APPLIANCES CO.

BRADDOCK, THOMAS AND MEADE STS. • PITTSBURGH 8, PA.

MSA

SAFETY EQUIPMENT HEADQUARTERS

AT YOUR SERVICE

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

BETTER PROTECTION

astute business executives are constantly proving that

IT PAYS 2 WAYS TO PROTECT PROPERTY

Automatically

LOWER COST

Here is a typical example: Officials of an Eastern industrial concern recently made a study of their protection expense. They were amazed to discover that the cost of patrolling one watchman's route—nights, Saturdays, Sundays, holidays and vacation periods—*was more than $10,000 a year.*

Upon the advice of their insurance broker, they called in an ADT representative to explain the advantages of ADT Automatic Protection. A survey revealed that the firm not only could reduce its protection costs substantially but, in addition, the plant and its continuity of operations would be much better protected.

This same discovery is being made every day by prudent businessmen who are striving to combat today's high costs

Thousands of firms, large and small, now protect their properties with appropriate combinations of ADT Automatic Protection Services: Automatic Fire Alarm, Sprinkler Supervisory and Waterflow Alarm, Burglar Alarm, and Automatic Heating and Industrial Process Supervision.

There's no need to gamble with human frailties when you can protect your property and your profits with systems that stand guard 24 hours a day to detect and report dangerous conditions *automatically.*

May we explain how ADT Automatic Protection can be applied to help you. Telephone the ADT Central Station in your city or write to our New York Executive Offices.

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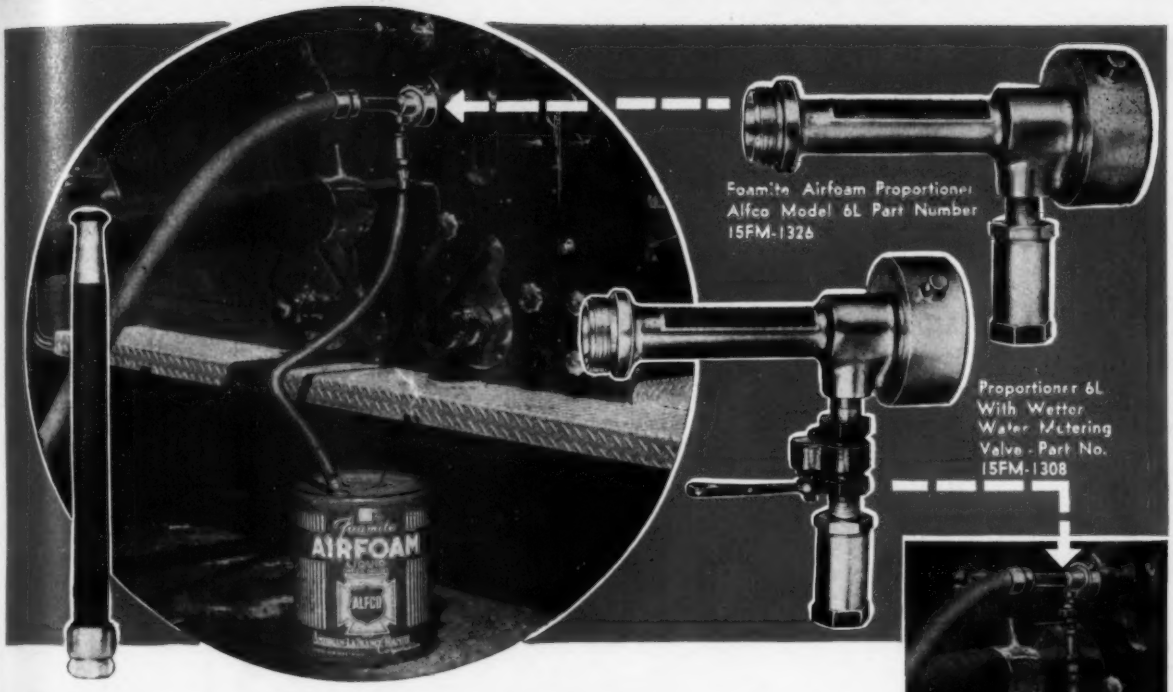
AMERICAN DISTRICT TELEGRAPH COMPANY

Executive Offices: 155 Sixth Avenue, New York 13, N. Y.

A NATIONWIDE ORGANIZATION



ALFCO PROPORTIONER—

A dual purpose fire-fighting aid

The Alfco Model 6L Proportioner, Part No. 15FM-1308, is available as a dual purpose unit for producing either 6% Foamite Airfoam, or Wetter Water, (Pentrate). It is available also for producing 6% Foamite Airfoam exclusively, as Part No. 15FM-1326, without the Wetter Water Valve. Note the following features:

Attaches to 2½" discharge gate at pumper . . . Drafts 6% Foamite Liquid at Proportioner . . . Airfoam-Generating Nozzle more easily handled without Pickup Tube as operator has greater freedom . . . Frees one fireman for other duties as pumper operator handles liquid containers . . . Wide operating pressure range on 2½" inlet side of Proportioner from 200 to 300 psi.

Up to 400 ft. of 1½" hose can be used on outlet side with excellent operation of Airfoam-Generating Nozzle . . . Operates with any Airfoam Nozzle having same solution capacity as Alfco Model 600 (60 gpm.) . . . Operates with 2 Alfco Model 300 Airfoam-Generating Nozzles with open Siamese for simultaneous discharge . . . Delivers up to 600 gpm. of Foamite Airfoam.

Wetter Water Metering Valve is separate part of unit, and has two positions . . . Open position drafts Airfoam Liquid . . . Closed position drafts Pentrate for making Wetter Water . . . Only necessary to equip 1½" hose line with shut-off nozzle with ½" tip for Wetter Water use.

Check valve prevents back-up of solutions into containers . . . Pickup Tube and hose line easily flushed after using Pentrate . . . Alfco Model 600 Airfoam-Generating Nozzle only accessory needed . . . For exclusive use for Wetter Water, (Pentrate) our standard Pickup Tube assembly needed only, Part No. 3M-1422 . . . Proportioner is brass with chrome plate . . . Valve, red enamel.

Upper left in circle, shows Alfco Foamite Airfoam Proportioner drafting 6% Foamite Airfoam Liquid at the pumper, thus providing operator at the Airfoam-Generating Nozzle more freedom to direct Airfoam stream.

Directly above: same Proportioner, but with Wetter-Water Metering Valve added to assembly, drafting Pentrate to produce Wetter Water stream at the shut-off nozzle. The Metering Valve has two positions. Drafting may be switched quickly to either extinguishing agent. Flush Pickup Tube and hose after use with Wetter Water.

For further information, write, wire, or telephone.
We have representatives in all principal cities.

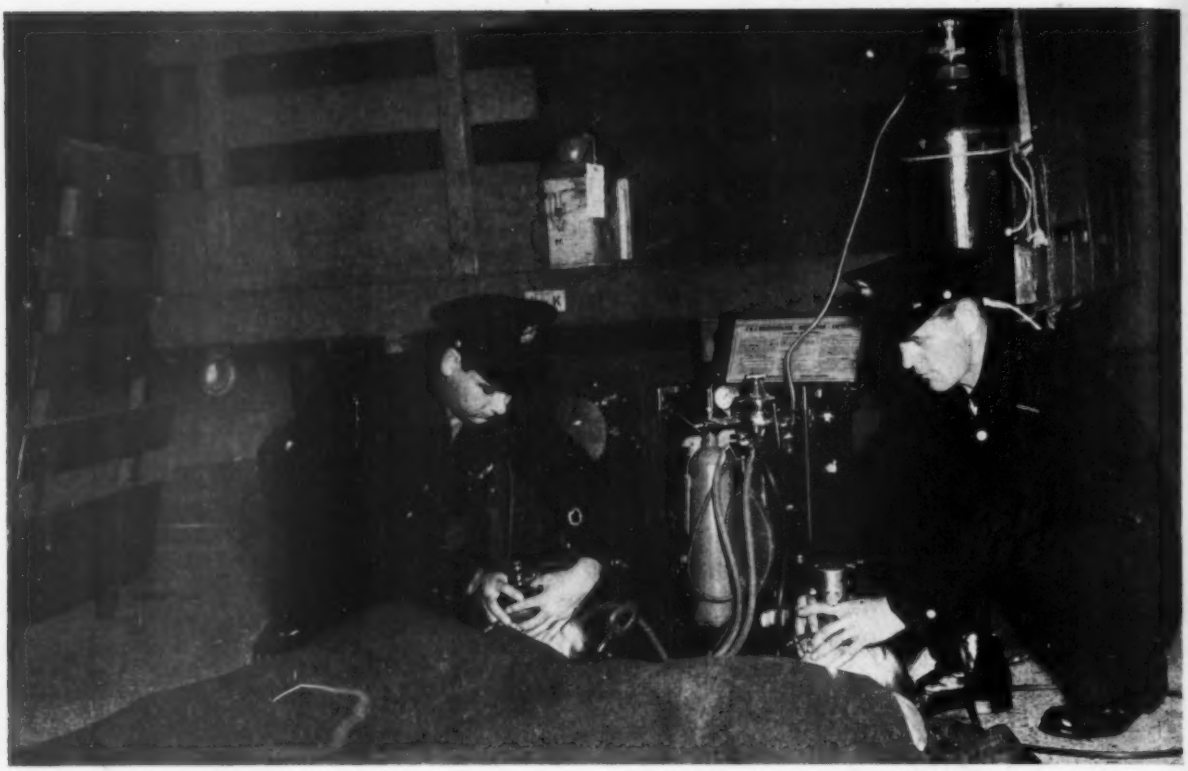
OUR 2nd Century of Leadership in FIRE PROTECTION

AMERICAN-LAFRANCE-FOAMITE Corporation

ELMIRA NEW YORK U.S.A.

IN CANADA, LAFRANCE FIRE ENGINE & FOAMITE LTD., TORONTO

ALFCO



Save More Lives With E & J RESUSCITATORS

- In asphyxiation cases the victim needs oxygen FAST: *the E & J breathes pure oxygen for the patient automatically, safely and effectively as long as necessary.*
- The victim may be severely injured or hard to reach for manual resuscitation; *the E & J touches only the face and can even resuscitate through a catheter if necessary.*
- The victim's throat may be blocked by unseen obstruction or faulty head position; *the E & J signals instantly if oxygen can't enter the lungs and it provides an aspirator to remove normal obstructions. When a partial obstruction cannot be dislodged, the E & J can be adjusted to usually by-pass it and get oxygen to the lungs at a slow but life-saving rate.*
- The victim's heart action may be weak; *the alternating positive and negative pressures as used by the E & J have been shown to benefit heart action.*

These are just a few of the reasons why Rescue Squads call the E & J their "greatest life-saving tool." Check these and many others at a free, full-scale demonstration right in your own Department. Just write or wire today to:

E & J RESUSCITATOR • INHALATOR • ASPIRATOR

Triple Model Illustrated

E & J MANUFACTURING COMPANY

Dept. 526-6, Burbank, California

JOHN BEAN

adds a new dimension to firefighting

the new combined
true high-pressure fog
and volume fire-fighter

Fast-striking high-pressure fog backed up by slugging volume power now makes it possible for you to fight fires as never before. Bean engineers add this greater dimension to firefighting techniques with their new combination high-pressure fog and volume fire-fighter. It boasts the biggest firefighting wallop ever packed into one unit. Two famous Bean pumps (operating simultaneously or separately) offer you the chance to attack the fire with 2 high-pressure and 4 volume lines. A 500-gallon tank allows you to start pumping seconds after you arrive at the scene. You can get in fast and keep slugging for a "quick kill."

Besides this new approach to firefighting methods, Bean engineers have fashioned a streamlined, sleek-looking truck with a low center of gravity for safe riding at high speeds. 5 full-size compartments furnish more than 45 cubic feet of storage space for supplementary equipment. A rear fill hopper with an easily removable strainer makes filling a simple operation. For fighting grass, prairie, or other running fires, both high-pressure lines can be used while the truck is in motion.

OUR BEST SALES TALKS COME FROM THE CHIEFS WHO USE BEAN FIRE-FIGHTERS

Write these men for their opinion of the unit.

Fire Chief Eugene Davidson—Bedford, Penn.

Fire Chief R. L. Henry—Annandale, Virginia

JOHN fmc BEAN

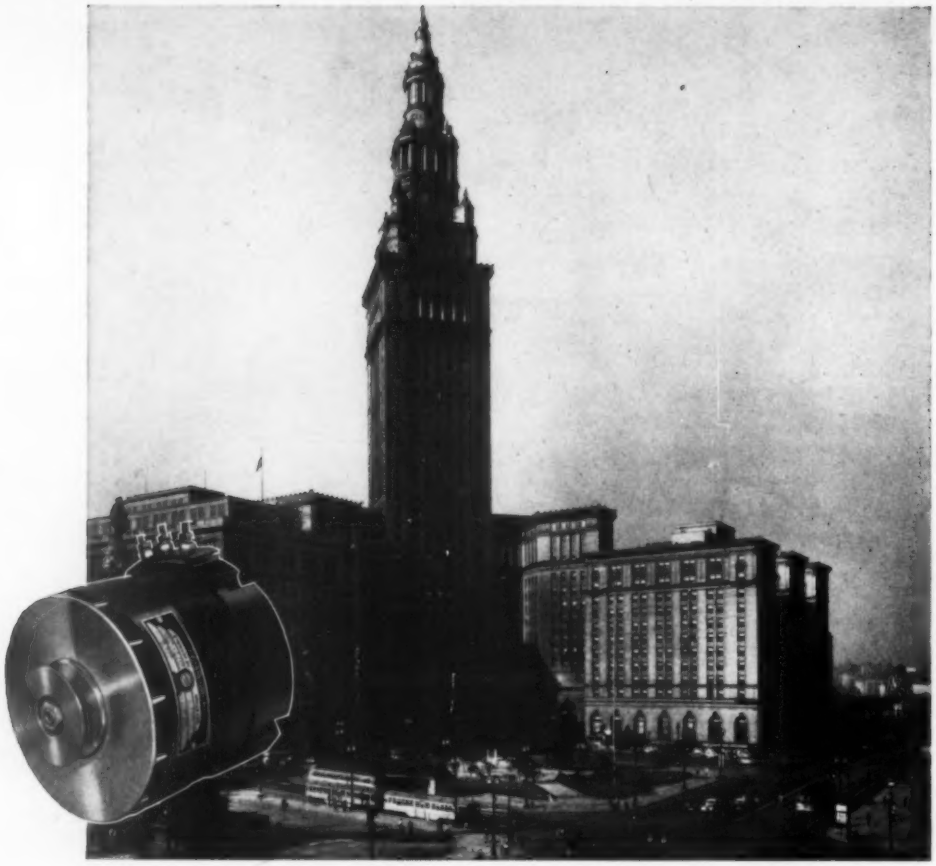
TWO-FISTED FIRE-FIGHTERS

Can be mounted on most standard truck chassis

John Bean Division
Dept. 126
Lansing 4, Michigan

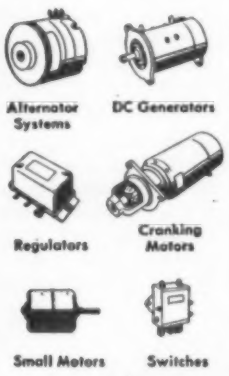
John Bean Division
P.O. Box 145
San Jose, California

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION



Recognized Everywhere...

L-N CUSTOM-ENGINEERED ELECTRICAL EQUIPMENT



YOU CAN RELY ON Leece-Neville

WHEREVER YOU LIVE, you recognize this view of Cleveland, a great city, famed for its Terminal Tower. And Cleveland recognizes the Leece-Neville Alternator... it is doing a great job every day on that city's fire equipment.

Cleveland is just one of many cities where Leece-Neville Alternators are helping fight fires and save lives. You'll find them in New York, Los Angeles, Denver, Dallas, Montreal, Quebec and hundreds of other cities, large and small, here and abroad.

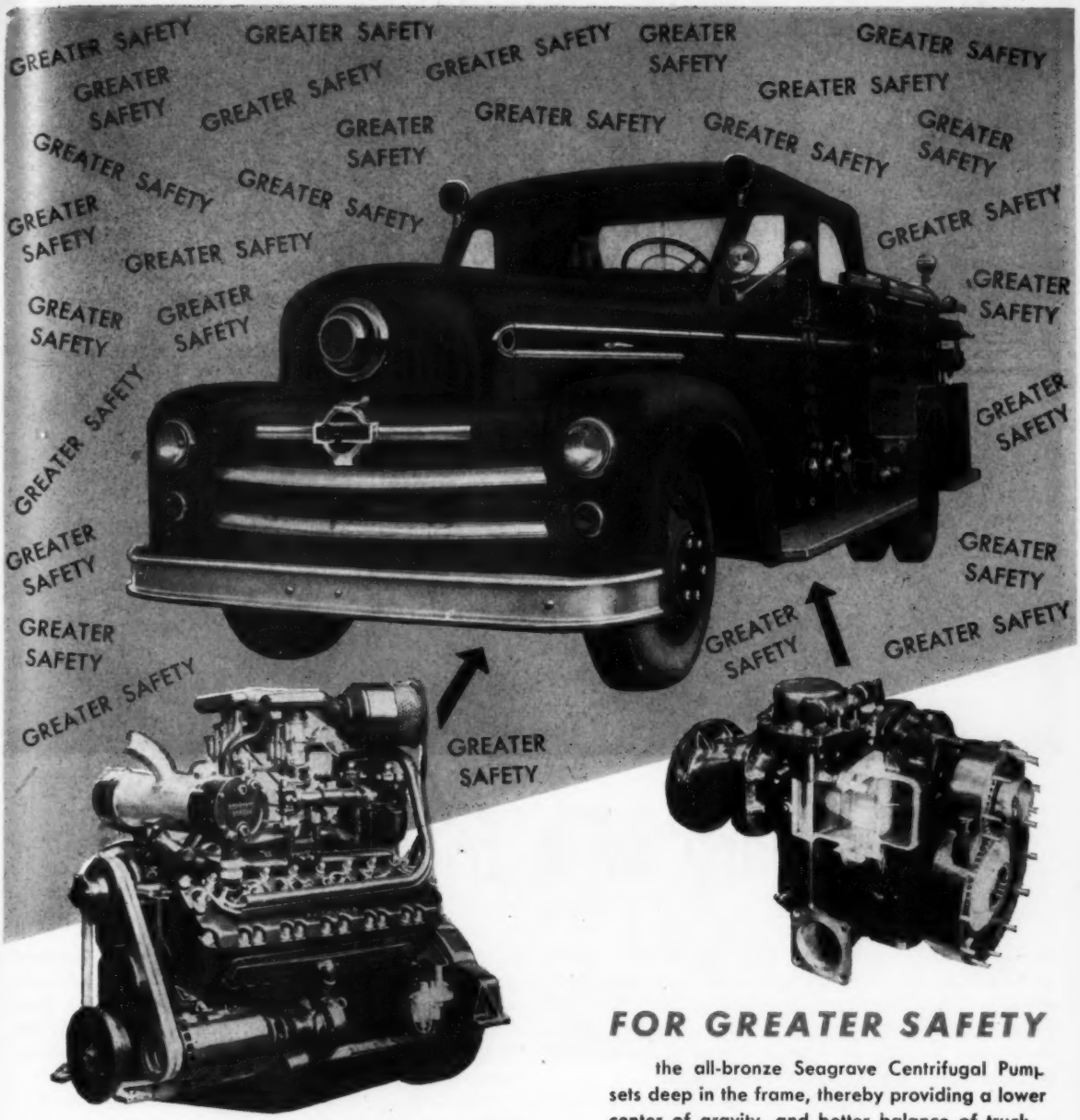
It's easy to find the reason for this wide acceptance of the L-N Alternator. More than seven years of performance on many thousands of vehicles has proven the advantages of the Leece-Neville Alternator System in place of the conventional d.c. generator.

Two-way radio operation is surer and clearer... when seconds count, that's vital! With 25 to 40 amperes idling and full current output from 18 m.p.h., siren, lights, radio and other accessories are carried by the Alternator, saving the battery for starting only.

Installation of a Leece-Neville Transformer with the Alternator gives your equipment a source of 110 volt power. You can plug in standard flood lights, search lights, portable saws, drills and other hand tools. Send for special Transformer folder.

There are L-N Alternators for 6 volt systems with capacities to 95 amperes; for 12 volt, up to 180 amperes; and for 24 volt, to 80 amperes. Be sure to specify Leece-Neville Alternators on your new equipment. Write The Leece-Neville Co., Cleveland 14, Ohio. *Custom-Engineered Electric Equipment Since 1909.*

L-N Alternators
proved by performance for over 7 years



FOR GREATER SAFETY

the powerful Seagrave V-12 engine is in the correct position in front of the cab where it protects the driver and crew from harm in case of collision.

The Seagrave V-12 is the greatest engine ever built exclusively for fire service.

FOR GREATER SAFETY

the all-bronze Seagrave Centrifugal Pump sets deep in the frame, thereby providing a lower center of gravity and better balance of truck.

This location also means there is extra room in the body of the truck for hose and equipment.

FOR GREATER SAFETY

- Seagrave Power Brakes
- Seagrave Heavy Duty Frames
- Seagrave All-Steel Bodies
- Seagrave Improved Steering

THE SEAGRAVE CORPORATION
Columbus, Ohio
Bickle-Seagrave, Lt'd.,
Woodstock, Ont.

Seagrave

THE GREATEST NAME IN FIRE APPARATUS

Handclasp of a friend-in-need

There's confidence in the very "feel" of the world famous C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers. The quick-acting "Squeez-Grip" fits your hand naturally like a handclasp ... hangs right ... carries right ... works right. You're in complete command of the situation instantly ... no fumbling ... no fatigue.

From the non-conducting, shatterproof discharge horn to the high strength, durably finished cylinder, you get top quality construction that results in a lifetime of satisfactory service. Because of the very few working parts and corrosion resistant materials throughout, the total cost to you over the years is less than other initially lower priced makes ... fire after fire, recharge after recharge, without trouble.

It's not hard to see, when you fully compare and try, why C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers are your best buy for killing flammable liquid and electrical fires, as well as some surface fires involving ordinary combustible materials. Sizes range all the way from 2½ to 100 pounds capacity ... all fully approved by the Underwriters' Laboratories, Inc., Factory Mutual Laboratories, Armed Forces and Government Bureaus.

With C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers the penetrating carbon dioxide is a clean, dry, non-damaging, non-conducting, inert gas ... smothers fire instantly, leaves no after fire mess ... harmless to equipment, materials and finishes ... even food is still perfectly edible.

Act now for complete free information on these first-rate, sure-acting fire extinguishers. Remember fire doesn't wait ... get the facts today!

C-O-TWO

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers
Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
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Sales and Service in the Principal Cities of United States and Canada

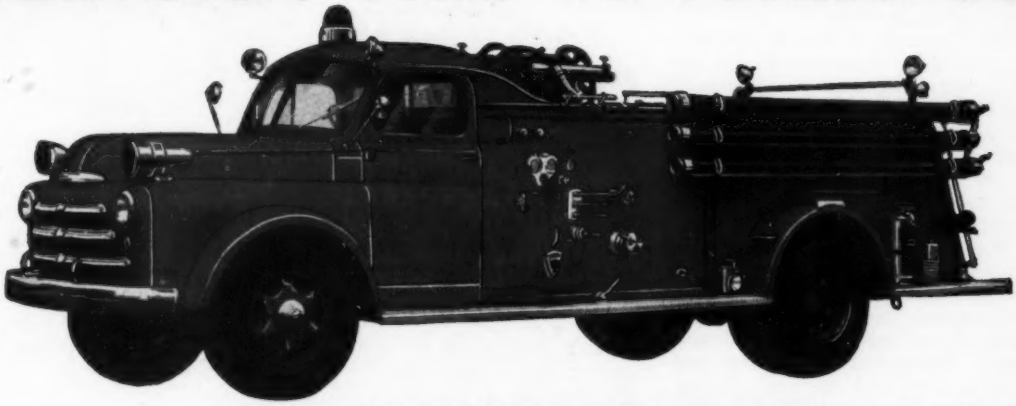
AFFILIATED WITH PYRENE MANUFACTURING COMPANY

it takes THIS-

plus
THIS-

and something you CAN'T SEE—to give you the EXTRA fire-fighting effectiveness of

AMERICAN FIRE APPARATUS



WHEN YOU VISIT BATTLE CREEK you can see our modern, efficient plant — up-to-date equipment — and the high-quality materials used in American Fire Engines. In a separate building on our four-acre site, you can see our all-weather indoor testing facilities, and nearby, the river where outdoor tests are made under actual field conditions.

WHAT YOU CAN'T SEE are the endless hours of effort spent in perfecting the *outstanding engineering features of* American Fire Apparatus. When you command American Engines at a blaze, however, you can see the *results* of this engineering!

For each superior feature gives you EXTRA *fire-fighting effectiveness you're glad to have in the pinches!*

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P. O. BOX 1024, MAIN ST. ROAD, BATTLE CREEK, MICH.

Write for literature and name of our nearest representative.

FOAM FACTS

Published quarterly in the interests of fire protection everywhere.

NATIONAL FOAM SYSTEM, INC.

WEST CHESTER, PENNA.

Quality Control in Every Step Assures Safe, Fire Blanketing Foam

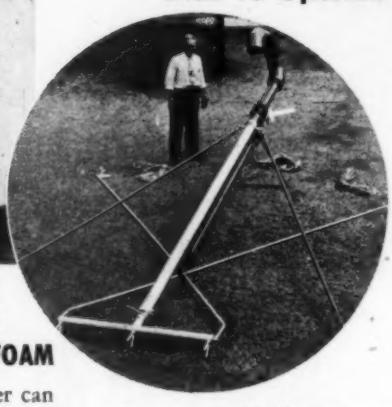
There's a difference in foam. Not all foam is good foam for the extinguishment of flammable liquid fires. Bubble size and stability are important and photomicrographs disclose major variations in foams of differing manufacture.

A rigid system of "quality control" in every step of manufacturing assures the right foam in National Aer-O-Foam. Photomicrographs of National Aer-O-Foam show a mass of uniformly small bubbles tightly knit in an unbroken blanket of fire-smothering foam that has long lasting stability.

There is a reason for this consistent, dependable quality. National Foam System controls every step of the manufacture of its foam in its own plants. Every one of the more than a dozen chemicals are pre-tested for peak quality and re-tested during processing. Finished products are then Fire-Tested for actual performance. When you buy National Aer-O-Foam you are certain of quality and Fire-Tested Protection.

NEW FOAM TOWER SAVES MANPOWER, SPEEDS TANK PROTECTION

Compact, needs Only Four Men To Operate



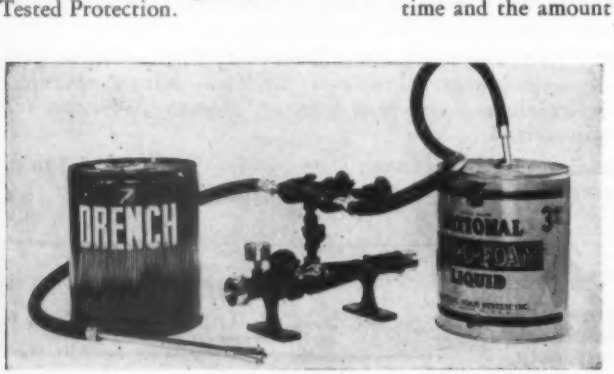
A new portable foam tower raised and lowered by hydraulic action is now available. It can be set up in a fraction of the time formerly needed and with one-third the manpower. The same tower may be used for tanks of different heights and can easily be converted for use with chemical foam.

Quick dependable hydraulic action, which can be applied at a safe distance from the fire, raises the tower to full height in a matter of seconds. When it is elevated to a point above the upper edge of the tank wall, pressure is released and the tower gradually descends until the gooseneck is hooked over the edge of the wall. All of this is achieved hydraulically with a minimum of manpower and with less pressure than necessary for the foam system itself. Each tower is equipped with National Foam's exclusive Selective Orifice Foam Maker. Write for new data sheet 653-3-A.

QUICK CHANGE UNIT PROPORTIONS DRENCH OR FOAM

A new National Proportioner can be used either for Aer-O-Foam Liquid or National's penetrating wetting-agent, Drench. Its quick changeover feature allows fire to be brought under control with a blanket of foam and the surrounding area to be wet down to contain the fire.

The prolonged dry spells of this summer have given fire fighters the opportunity to learn about the quick effectiveness of Drench. Used as a wetting agent on Class A fires, a 1% Drench solution effects a 40% to 70% reduction in both the extinguishing time and the amount of water used.



By simple valve adjustment either Drench or Aer-O-Foam can be quickly proportioned in this new National Proportioner.

Get Your Copy of FOAM FACTS

For interesting facts and data on fire protection let us mail you FOAM FACTS Quarterly. Send in your request.

New RCA Fleetfone Station Consolette

Engineered

to save installation and maintenance time

– RCA's

performance-proved 2-way radio "DESK STATION"

Now . . . a 60-watt transmitter plus receiver in a single case. Saves space. Simplifies operation. Makes maintenance easier. Read how . . .

Good news for 2-way radio users! A "desk station" you can install 'most anywhere . . . on a desk, a table, or even on a shelf against the wall.

60-watt transmitter exceeds FCC and RTMA requirements

Precision controlled by RCA ovenless crystal unit, with spurious emission reduced to minimum. Two-frequency or three-frequency transmission possible. Very economical to operate. Most tubes work at less than 70% capacity. Result: longer tube life, less maintenance. Uses standard tubes.

Receiver gives adjacent channel selectivity

Exceptionally sharp selectivity. Circuits specially designed to give clear reception from mobile transmitters, even in high-interference areas. Two-frequency reception possible by adding another frequency kit. Receiver uses only 5 tube types. Allows minimum spare-tube stock.

Console built for easy operation and servicing

Sloping front panel, easy access to controls. Built-in direct reading electric clock. Transmitter-receiver chassis slides out at the top for ready access.

Get full details . . . mail coupon today

Find out all about this great new "desk station" that gives you full-power performance from a single package. All backed up by RCA . . . world leader in radio. Service available from RCA Service Company if desired.

FREE BOOKLET. . .

MAIL COUPON

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Please send me full information on your new RCA Fleetfone Station Consolette.

Name_____

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City_____ State_____

Also, please send me information on use of 2-way radio in industry checked below:

- ☐ **General Industry (Utilities, Construction, Petroleum, Lumber, Mining, etc.)**
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RCA

RADIO CORPORATION of AMERICA

FROST-PROOF DESIGN

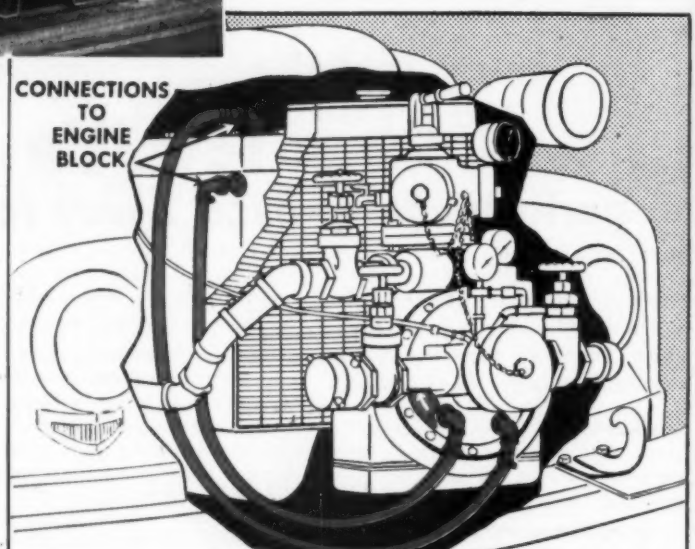
of Barton-American Type UA Front Mounted Fire Pump gives extra safety factor for winter operation

You *never* have to worry about your Barton-American Type UA Pump freezing! For this unique, effective *frost-proof design* gives you positive operation even in the coldest weather!

Water at engine temperature constantly circulates from engine cooling system through the cored suction head of the UA Pump. Even at sub-zero temperatures, this always keeps the pump well above the freezing point.

It's a closed system with no possible loss of radiator water or anti-freeze . . . operating on the same principle as a car heater.

In addition this feature of the UA Pump increases the summer cooling capacity of the system . . . gives you a cooler engine in hot weather as well as positive protection against freezing in cold weather!



Hose line circuit may vary with make of engine.

ONLY THE BARTON-AMERICAN TYPE UA PUMP GIVES YOU *ALL* THESE VALUABLE FEATURES:

- Is Easy to Install
- Fights Fires on the Move
- Gives Pressures to 400 lbs.
- Better Weight Distribution on Truck
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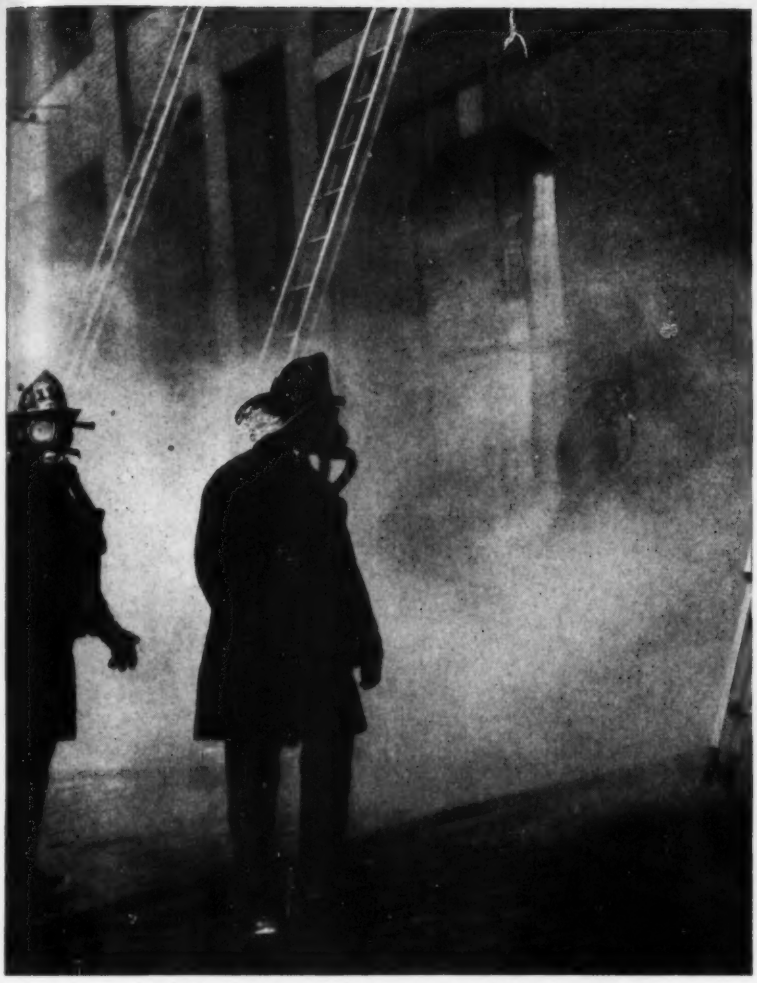
- Lets You Carry More Water or Equipment
- Effective Frost-Proof Design
- Both Volume and High-Pressure Fog Stream
- Positive Non-Slip Clutch

WRITE TODAY FOR UA PUMP BULLETIN NO. 8330-B

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

In Canada:
American-Marsh Pumps (Canada) Ltd., Stratford, Ont.



Philadelphia fire fighters find "Big Bertha" miracle-aid in cellar fire.

Big Show by "Big Bertha"

In the cellar of the burning building above, "Big Bertha" is putting on a big show.

Before she arrived, ordinary hose lines proved no help. Upon her entrance, the fire was controlled in minutes.

"Big Bertha", so christened by Deputy Fire Commissioner George Hink of Philadelphia, is a giant WaterFOG nozzle. Delivering 500 gallons of water a minute in a fire-eating mist, "Big Bertha" is ordinarily used on turrets, portable deluge sets or ladder pipes. It can be attached to regular hose lines by means of a Rockwood Swivel Handle Play Pipe and a Rockwood Ball Type Shut-Off.

This giant nozzle not only controls fires rapidly but reduces temperature of entire surrounding area, protects firemen from smoke inhalation — and speeds return of fire companies to their station. Put "Big Bertha" on *your* fire force — it is but one of many Rockwood portable fire-fighting items that engineer water to cut fire losses.

ROCKWOOD SPRINKLER COMPANY

Engineers Water... to Cut Fire Losses

How Rockwood Engineers Water to Cut Fire Losses

A Solid Cone of WaterFOG is discharged by the Rockwood Type "B" 500 G.P.M. High Capacity WaterFOG Nozzle. Millions of fine water particles completely fill the cone preventing vapor pockets. As particles enter fire area, they turn into steam.

Rockwood Type B High Capacity WaterFOG Nozzle, combined with Swivel Handle Play Pipe and Ball Type Shut-Off, quickly connects to ordinary hose lines, thus enabling this powerful nozzle to be used in hard-to-reach areas such as cellars and on large flammable liquid fires.

SEND FOR THIS INFORMATIVE BOOKLET

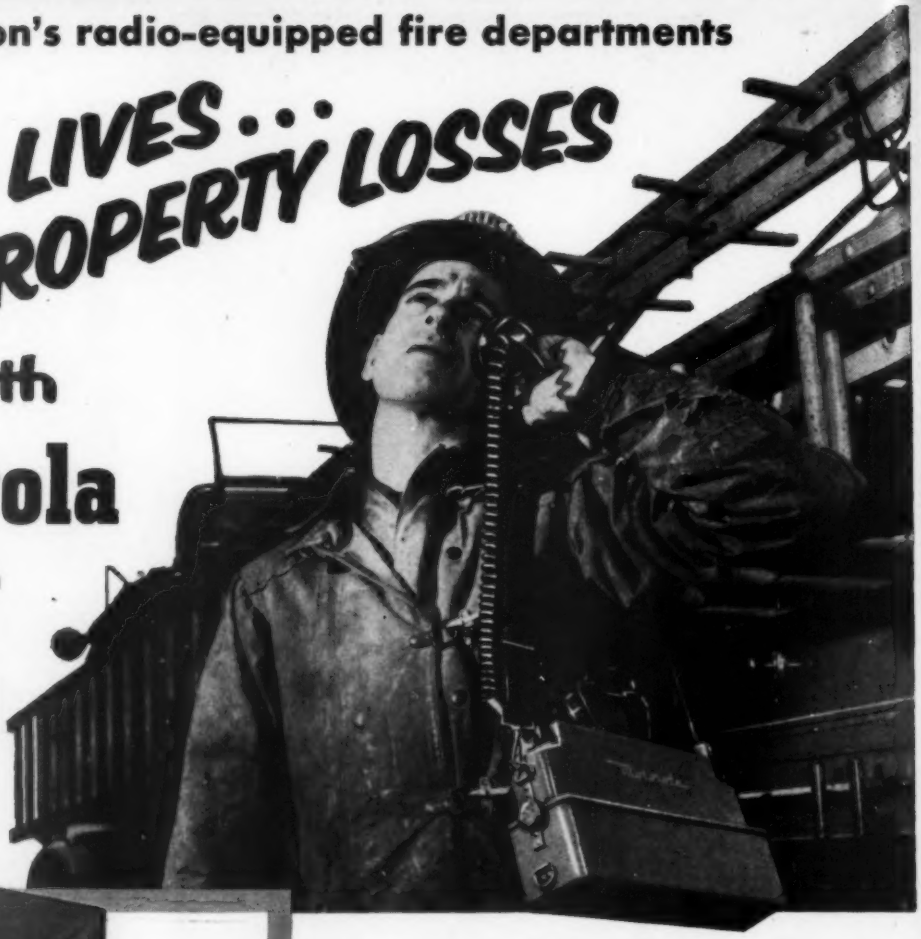
ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
54 Harlow Street
Worcester 5, Mass.

Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....
Title.....
Company.....
Street.....
City.....
Zone.....State.....

the nation's radio-equipped fire departments

SAVE LIVES . . . CUT PROPERTY LOSSES with Motorola 2-Way Radio



Uni-Channel Sensicon Dispatcher can be used as fixed or mobile unit. It serves as a base for portable units without tying up command cars . . . it's always ready for immediate use.

Handie-Talkie® . . . takes two-way contact anywhere. It's lightweight and rugged. Just slip on shoulder strap, and it gives immediate communication with headquarters.

Pack Set gives 2-way portable communication for extended service. Heavy-duty battery assures reliable contact over long periods.

Instant communications coordinates action . . . speeds fire-fighting . . . saves time and mileage

Rugged Motorola 2-way Radio gives firemen the dependable, flexible type of communication they demand and need. "Handie-Talkie"® radio-phones go anywhere a man can go—enable firemen to go into burning buildings while retaining contact with commanders outside. Motorola dispatchers—in command cars and heavy equipment—coordinate action, assure maximum control of any situation.

Eight exclusive Motorola improvements guarantee precision selectivity, time-tested durability, obsolescence-proof design. 24 years of Motorola electronic leadership go into every custom-tailored installation.

Let a skilled Motorola engineer in your vicinity give you the complete 2-way Radio story.

Write to Dept. 2286-FE today!

2-way Radio

Motorola

Communications & Electronics, Inc.

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900 N. Kilbourn Ave., Chicago 51, Illinois • Rogers Majestic Electronics Ltd., Toronto, Canada

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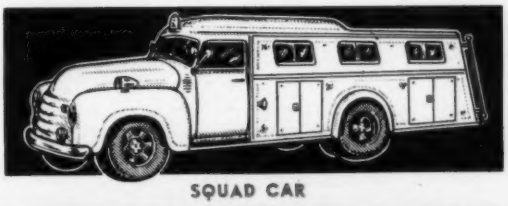
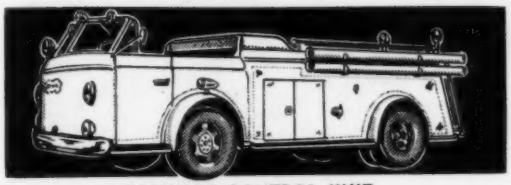
Customizes to meet the most exacting demands.



SQUAD CAR

FIVE-MAN CAB

RESCUE VAN



FORWARD-CONTROL UNIT

Let THIELE design and build for you the ultimate in durable, economical fire apparatus. Mounted on any commercial chassis employing volume pump, high pressure fog or both. THIELE will customize your equipment to meet your specific needs.

Discover why more and more towns are buying THIELE fire trucks and apparatus. Join those users of THIELE equipment that have experienced the satisfaction of owning a fire truck that is *durable, functional* and *economical.*

• PROMPT DELIVERY!

THIELE!
Originators & Builders of the "Fog-Kar"

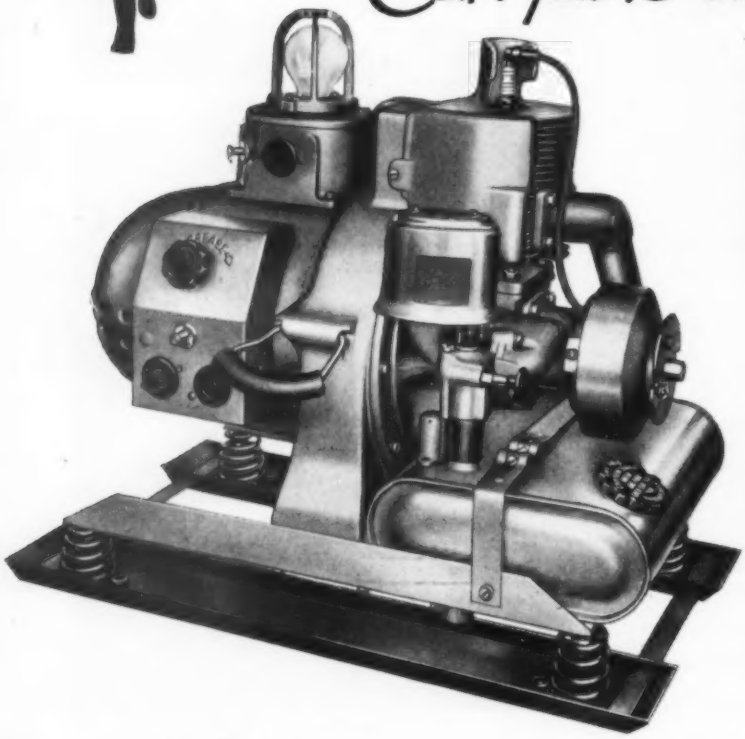
A Recent Delivery . . .

500 GALLON PUMPER 4 Stage—Volume and high pressure fog combination

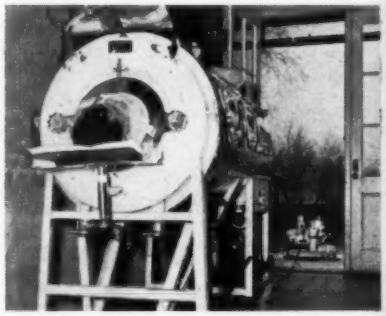
W. J. THIELE & SONS, Inc. Pine at Cherry **JOHNSTOWN, PA.**

Designers, Manufacturers and Distributors of Truck Bodies and Equipment

All from ONE HOMELITE Carryable GENERATOR



Homelite Generators give you brilliant, flicklerless floodlighting for night fires or accidents.



Homelite Generators give you emergency power for iron lungs, hospitals, buildings or communication systems.

There's always a need for a Homelite Carryable Generator. Tonight, you might need it for floodlighting a fire, or a bad accident, or a drowning. Tomorrow, it could operate electric saws and other tools at a fire or accident. Or you might get an emergency call for your Homelite to keep an iron lung going for some young polio victim. Yes, and if disaster strikes . . . a hurricane, tornado, flood or blizzard . . . the call goes out for miles around to *rush the Homelites in.*

Homelite Gasoline Engine Driven Generators . . . light enough for one man to pick up and carry . . . are, more than ever, a must for fire departments. You need them for fires. You need them for accidents, emergencies, disasters. You need them for civilian defense.

Write today for our new bulletin showing many important uses of all Homelite Carryable Equipment . . . Generators, floodlights, pumps and chain saws. It's free.

Homelite Generators give you power for operating chain saws and other electric tools.

Manufacturers of Homelite Carryable Pumps • Generators Blowers • Chain Saws

PERFORMANCE · DEPENDABILITY · SERVICE

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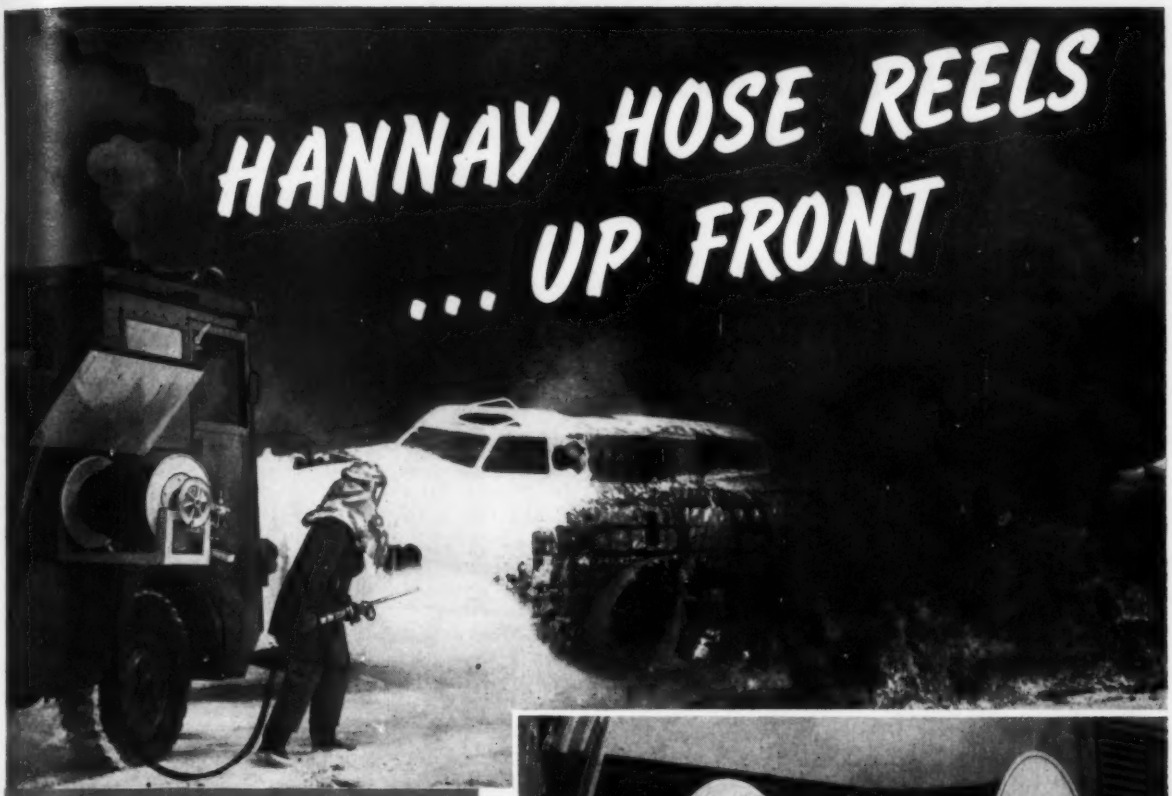
HANNAY HOSE REELS ... UP FRONT



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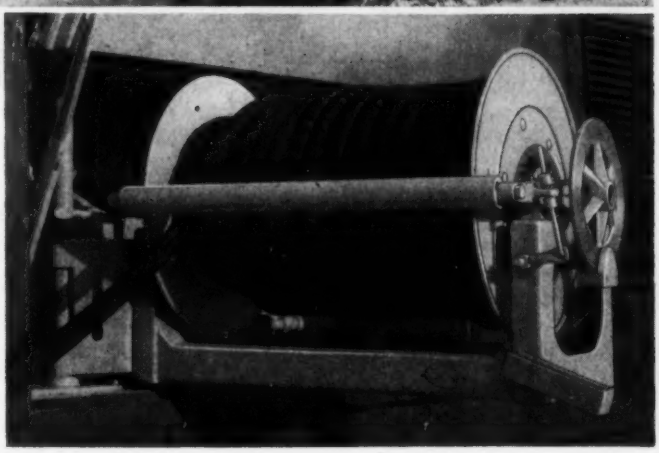

Check the Superior Advantages

HANNAY Electric Drive HOSE REELS

- WATER RESISTANT
- VAPOR RESISTANT
- EXPLOSION - PROOF

★ Extra strong; withstand high pressures

★ Explosion-proof, heavy duty motor, sealed against fog, foam, fumes, water

★ Sealed push button control; no gears to shift; no clutch to engage

★ Safe rewind speed; always under control

...LOOK FOR THIS

Yes . . . in performance and service, Hannay Hose Reels are "up front". The dramatic illustration above shows Air Force Fire Fighters spraying foam from a new American LaFrance crash truck on burning aircraft. And the reel, of course, is a Hannay, specially designed for military service. When YOU need good hose reels, standard or special performance, remember HANNAY. . . . built to do a BETTER job, in fire-fighting, in industry, in national defense.

HANNAY
REG. U.S. PAT. OFF.
HOSE REELS
CLIFFORD B. HANNAY & SON, INC.
WESTERLO, NEW YORK

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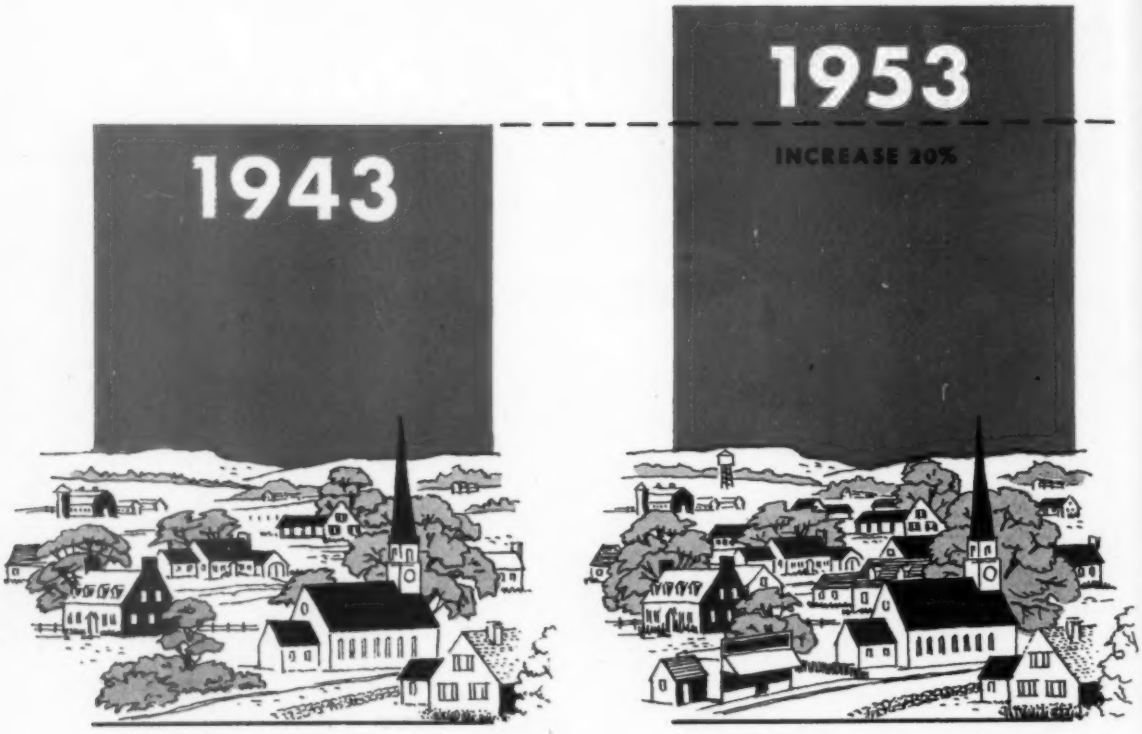
MANUFACTURERS OF MANUAL AND POWER OPERATED HOSE REELS FOR EVERY PURPOSE

This is YOUR Community



During the past 10 to 15 years, population has increased and replacement values of existing properties have skyrocketed. You know the story, yet how much time has been spent to see that fire defenses have kept pace with community growth in other directions?

Check these points for a quick analysis of the adequacy of your 1953 fire defense system —

✔ Your population has increased __% in the past 10 years.

✔ Your number of buildings has increased __%.

✔ Values of risk have increased __%.

✔ Your fire alarm box system increased __%.

If your answers don't seem to "fit together," it's time to survey your community, set up plans for a realistic 1953–1963 fire alarm box system. Gamewell can make such a survey for you, and it will cost you nothing unless and until you buy materials or services from us.

Write us about a survey of your needs for the present and the future.

THE GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
In Canada: Northern Electric Co., Ltd., Belleville, Ont.

FIRE ENGINEERING

OCTOBER, 1953 VOL. 106, NO. 10

With the Editor

Pre-Planning for the Major Emergency

It's an old, if trite, truism that no two fires are alike. Most fire chiefs will agree with that axiom, particularly those who are called on to battle blazes which are by-products of this hectic, chemical-atomic era in which we live and labor.

The unusual character and severity of the fires, and other emergencies facing the nation's fire service, is being written in the daily fire department reports, and in the nation's press from coast to coast. It was a theme which ran current through many of the symposiums and the papers presented at the Toronto Conference of the International Association of Fire Chiefs last month. And it is something that must have more serious consideration by the fire service if we are to gain on the fire losses—and be ready for any cataclysmic enemy atom attack.

At the risk of being repetitious, we quote another truism which helps drive home our point. Whether viewed from the standpoint of peacetime or wartime emergencies, the fact should be self-evident that (1) in any serious emergency no matter whether man-made, i.e., fire explosion, building collapse, train wreck, or "act of God," such as tornado, flood, earthquake, the *first agency* to be called upon for help is the *fire service* (2) the fire service is expected to respond (a) without delay (b) with all the necessary equipment and (c) the trained personnel to cope with the situation.

You and your fellow fire chiefs may know how difficult, even impossible, this may be, but make no mistake, Mr. and Mrs. John Q. Public believe implicitly that this response to their calls for help will be immediate, efficient and that all will be well "because the fire department is on the job."

This simple truth was attested by the Chiefs of Worcester, Mass.; Flint, Mich., and by Michigan's Fire Marshal in their accounts of the tornados that devastated areas within their political subdivisions. It was manifest in the critical situation facing the Philadelphia Fire Department while simultaneous fires struck as a large complement of fire fighters were struggling to confine and control a stubborn rubber warehouse blaze. It was brought out in the testimony concerning fires in nursing and convalescent homes, and in meeting the problems of controlling hazards incident to the transportation of flammable liquids and explosives. And it ran like a thread through the fabric of talks by civil defense officials of Canada and the States at the September Toronto conference.

Governor Val Peterson, Administrator, Federal Civil Defense Authority, Washington, reported: "In any Civil Defense effort the Fire Services assume primary importance, not only because of the nature of the fire, but because Fire Services are an existing organization with long experience in disaster operations."

Within the fire service, all hands would like devoutly to see the day when it could measure up to the confidence and hopes of Governor Peterson and the public in general. But the plain truth is that no fire force can expect to be prepared in every respect to face up to all the potential major emergencies that it may be called upon to meet. There are magnificent fire departments in America. They may be expected to cope with the most extreme catastrophies. But there is not one sufficiently equipped and manned to measure up to the crisis that it will have to face in a modern enemy atomic attack.

Nor are there fire department budgets large enough to provide all the essential resources of men and material for the departments in target areas and elsewhere to meet the challenge of either such enemy raid, or of the unexpected multiple-disasters of our own making.

What then is the answer? Is there anything can be done about it? One answer, at least, was advanced by the same persons who explained the problems in Toronto. That is to pre-plan for preparedness; to blueprint, if nothing else, the steps that should be taken to face up to all major disaster emergencies. And a sound segment of that planning is the mobilization and coordination of all available resources in the area under what, for want of a better term, we may call mutual aid. No fire department is too small, or too large, to plan and prepare to use, not only its own facilities, but those which are or will be available to it in time of crisis.

Fred Shepard

Fine Technical Program Features 80th Conference of I.A.F.C.

Trucking Hazards, Protection of Nursing Homes, Crash Fires and Civil Defense among Topics Discussed

A STAFF REPORT

IT is difficult to describe the 80th Conference of the International Association of Fire Chiefs without resorting to superlatives. For it was a superlative affair in nearly every respect. Only two other Conferences have equalled it in total attendance and none has shown such interest in technical and educational sessions.

The 80th Conference made history in another detail: it was the first time the International and Canadian Divisions participated in a joint gathering.

Thirty-two years have passed since Toronto first served as host to an International Conference—that was the 48th, in 1920. And 16 years have gone by since the City last saw the International—that was the 64th, held in July of 1936. Only a few members who were present at the conference in 1932 were on hand for the formal opening of the 80th Conference Monday, September 14, last.

The cold statistics of this warm-hearted Conference are told in the accompanying box. But statistics do not make a conference—only people do, and it was the human element that spelled success for the 80th Conference, from opening to closing gavel.

Its very size imposed an almost unsurmountable burden upon Toronto's hotel and entertainment facilities; notwithstanding the splendid job of advance hotel registration done by William Carson and District Chief Stanley Ridge and aides, and the allocation of additional rooms to the delegates by the leading hotels, there were a number who were inconvenienced at the outset. Without exception, however, all visitors were ultimately accommodated. Conference headquarters were at the Royal York.

According to Chief Al. Koltonski of Rutland, Vt., who once again recorded the influx of registrants, the 1735 who received badges represented nearly every state in the nation, as well as the Dominion, England, Cuba, Puerto Rico, Philippine Islands and Japan. And—to chronicle another "first"—the distaff side of the registration was heavier than ever. So, too, was the contingents of "buffs" led by the Toronto Box 12'ers, who aided the efficient conference staff of the Toronto Fire Department to handle details. But to this number should be added the itinerant firemen, buffs and only temporary attendance.

Canadian Chiefs Meet Monday

Monday, September 14th, was given over to the 45th Annual Conference of the Canadian Association of Fire Chiefs, formerly the Dominion Association of Fire Chiefs—the name having been changed last year. The sessions were held in the spacious Concert Hall of the Royal York Hotel, with a large attendance.

Fire Chief Gray Burnett of Ottawa, president of the Association, presided and at the head table to assist him were Chief Francois Premont of Arvida, Que., first vice-president; Chief Gordon Huff of Brantford, Ont., second vice-president; the Board of Directors on his right, and distinguished guests on his left, including Chief Arthur Johnstone of the Surrey Brigade, England, the chief speaker and others.

The Rev. McBride of Toronto delivered the Invocation, after which a simple memorial service was held, followed by the business and technical sessions. In the latter, President Burnett and Secretary-Treasurer Alan Clark, of Lakeview, Ont., traced the growth and progress of the Association.

The technical session included an address by the Fire Commissioner of Saskatchewan, Mr. R. Switzer, on the subject of fire prevention, in which he stressed the importance of the fire service creating good public relations. He was followed by Chief Ben. Wade of Nova Scotia whose talk on preventing fires was so well received that IAFC executive secretary Jay Stevens requested and was given permission to duplicate it and distribute it through the International.

The election of officers resulted in the following slate: President, Francois Premont, Arvida, Que.; first vice-president, Gordon Huff, Brantford, Ont.; second vice-president, Ben. Wade of Kentville, N. S.; secretary-treasurer, Alan Clark, Lakeview, Ont.; and the following directors: past-president, Gray Burnett, Ottawa; Chief W. Short, Lethbridge, Alb.; C. C. Rollins, Toronto, Ont.; Jas. C. Arnott, Toronto, Ont.

Concluding the session, Dominion Fire Commissioner C. Thomson presented the Association with a library of fire service publications.

HIGH LIGHTS IN THE 1953 I.A.F.C. CONFERENCE AT TORONTO, ONT.

Registration: **Total attendance over 1800. For the first time the Canadian Association of Fire Chiefs and the I.A.F.C. held a joint conference.**

Exhibits: **Total 66, occuping a ballroom and foyer of Royal York Hotel. Motor fire apparatus shown on parking lot across from hotel.**

Educational Program Outstanding: **Eighteen scheduled topics, including five symposiums and a forum of reports—40 participating speakers.**

Elaborate Entertainment and Recreational Program.

Site of 1954 Conference: **Houston, Texas; Tentative date, October 19-22. Rochester, N. Y., and Omaha, Neb., ask for 1955 Conference.**

Officers for 1954: **President, Chief Henry G. Thomas, Hartford, Conn.; First Vice-President, Chief C. Gray Burnett, Ottawa, Ont.; Second Vice-President, Chief William Fitzgerald, Seattle, Wash.; Secretary-Treasurer, Ex-Chief Daniel B. Tierney, Arlington, Mass.; Executive Secretary, Jay W. Stevens, San Francisco, Cal.**

New Officers of the I. A. F. C.: Chief Gray Burnett, Ottawa, Ont., First Vice-President; Chief Henry G. Thomas, Hartford, Conn., President; Ex-Chief Daniel B. Tierney, Arlington, Mass., Secretary-Treasurer; Jay Stevens, San Francisco, Cal., Executive Secretary. (Absent: Chief William Fitzgerald, newly elected Second Vice-President).

Retiring President, Chief G. R. McAlpine, Oklahoma City (right), passes the gavel over to the incoming President, Chief Henry G. Thomas, Hartford, Conn.

I.A.F.C. Conference Begins Tuesday

The I.A.F.C. 80th Conference was officially opened by President George McAlpine of Oklahoma City Tuesday morning with addresses of welcome by Toronto's Mayor Allan A. Lamport; Hon. Dana Porter, Q.C., Ontario Attorney General, and Toronto's Host Fire Chief Joe Waterman. Executive assistant William F. McCartney of the Toronto Fire Department was master of ceremonies.

Chief Henry Thomas, Hartford, Conn., Association first vice-president, responded to the addresses of welcome. In his formal talk, President McAlpine urged continued and increased emphasis on fire prevention education. Mr. Porter gave details of Ontario's fire-fighting services, including those of the Provincial Department of Lands and Forests, which alone has 1,350 fire fighters and more than 1,000 pieces of equipment.

At noon, hundreds of delegates paraded behind the band of the 48th Highlanders to receive an official welcome from Mayor Lamport at the City Hall. They also later placed wreaths on the Cenotaph as a memorial service for the war dead.

Technical and business sessions got under way in the afternoon with reports on progress by secretary-treasurer Daniel B. Tierney and others.

Reports on Civil Defense

Kyle P. Laughlin, Director, Fire Division, Safety Office, Federal Civil Defense Administration, Washington, D. C., was the first speaker. He brought a message from Val. Peterson, Administrator of Civil Defense, which had frightening overtones. According to the latter, Russia has atomic weapons and some 1,000 long-range bombers capable of reaching any point in the United States or Canada on one-way flights and most of our initial target areas on two-way flights with refuelling. Mr. Laughlin told about the atomic bomb explosions in the Nevada desert. The worst fire danger from atomic attack, he said, came from accumulations of waste paper and so-called kindling materials, such as dried grass, fallen leaves, and other combustibles. He drew a comparison between primary and secondary fires following a bomb blast. "If there are ten square miles of such

Roi B. Woolley opens the panel discussion on methods of preventing fatalities from fires in nursing homes. Other panelists: A. Richter Townsend, Chief of New York State Bureau of Fire (center); and Chief Henry G. Thomas, Hartford, Conn. (right).

They spoke on Civil Defense: Left, Kyle P. Laughlin, Director, Fire Division, Safety Office, Federal Civil Defense Administration, Washington, D. C.; right, Major General F. F. Worthington, C.B., M.C., M.M., Federal Civil Defense Co-ordinator for Canada, Ottawa, Ont.

Some distinguished guests among the many who visited the Fire Engineering booth, Toronto. Left to right: Chief Cipriano Cruz, Manila, P. I.; Chief Officer Arthur Johnstone, Surrey County Fire Department, London, England; Chief Raul Gandara, Fire Service of Puerto Rico.

area (where fire hazards exist) not demolished by the blast, but within the primary fire area, we could have more than 100,000 fires starting from exterior kindling points under dry clear weather conditions," warned Mr. Laughlin.

More imagination in the planning of Canadian communities, in fire-fighting methods and building construction was suggested by Maj.-Gen. F. F. Worthington, Dominion Civil Defense Coordinator, in his address to the Conference. Fifty pumpers, he said, have been provided for training of Canadian auxiliary firemen. The idea that because the U. S. has so many "juicy" targets for enemy bombers Canada would be bypassed is fallacious, he believed. Canadian defenses are getting stronger daily, he said, making it more difficult for enemy aircraft to reach the States.

Deputy Chief Thomas P. O'Brien, in Charge of the New York Fire Department Fire Alarm Bureau, was unable to be present but his interesting paper "Looking Ahead in the Field of Fire Alarm Communications" was received. In this he points to the "woefully outmoded" fire alarm systems of many North American Cities, and he strongly recommended installation of supervised fire alarm systems that permit transmission of fire alarms directly to local fire departments. The evil of false alarms must be faced, he said, and it is high time corrective measures were undertaken. Speaking also for the International Municipal Signal Association, Chief O'Brien decried the thinking which would substitute corner telephones for the long-used municipal fire alarm boxes for the transmission of street alarms and emergency calls.

Fire Hazards of Natural Gas

Dr. Matthew M. Braidech, Director of Research, National Board of Fire Underwriters, New York City, the next speaker, traced the development of fuel gases, with emphasis on natural gas services. Some 9,000 fires per year with property damage of $11 million are attributable to these gases, Mr. Braidech said. He told about the efforts of the gas industry and the special I.A.F.C. Committee on the subject to reduce the fire and explosion hazards of such fuels. It is proposed to prepare a text on the subject of gaseous fuels; Chiefs of larger municipalities will be polled to determine training given to firemen with respect to fuel gas hazards.

Tuesday evening was given over to the "Fire Chiefs Ball" at the Hotel Royal York with food and refreshments, and music for the tremendous crowd in attendance.

The technical sessions continued on Wednesday, the 16th, with an informative paper by Hubert Walker, Manager M.F.A. Sales Engineering, American-LaFrance-Foamite Corporation, Elmira, N. Y. The subject was "Relays to Get Water on the Distant Fire."

As an interesting interlude, colored slides of the recent fire and explosion in Wilmington, N. C., were shown and described by Chief Ludie Croom of that city. Following this, a most interesting series of reports on Fire Department Operations in tornado disasters was presented by fire chiefs who had really lived through such experiences. They included Chief Herbert Travers of Worcester, Mass., who told about the tragic experiences in fighting fire and making rescues in the devastated area of his city; Arnold Renner, Michigan State Fire Marshal, and Fire Chief Calvin Johnson of Flint, Mich., who detailed experiences relating to the Michigan tornado, while Chief Elmer Cain of Cleveland, O., described some of the problems facing his department when the "big winds" struck his area. These experiences demonstrated the urgent need of radio communications, available water supplies, ample rescue equipment, and manpower. Good, workable mutual aid plans proved blessings where they existed.

Chief Officer Arthur Johnstone, Surrey County Fire Department, London, England, told about British fire defense measures. He said that it would take a thousand pumpers, pumping a million gallons of water a minute, to control a fire in Toronto such as he envisaged resulting from an atom attack.

One of the best received papers of the session was that of Fire Commissioner and Chief, George E. Hinck, of the Philadelphia Fire Department, Philadelphia, Penn. In this the chief described the recent stubborn rubber warehouse fire in his city. Chief Hinck brought with him several members of his staff and a series of original photographs picturing the successful application of wet water on this fire. His department is now making regular use of wetting agents, he disclosed.

The afternoon session opened with the introduction of exhibitors, followed by an address by A. W. Krulee, Head of Section, Crash Fire Equipment Section, Bureau of Aeronautics, Navy

Among the speakers at the I. A. F. C. Conference at Toronto were (left to right): Arnold C. Renner, Chief, Fire Marshal Division, Michigan State Police; Chief George E. Hink, Philadelphia; Gordon Shorter, Engineer, National Research Council of Canada.

At the pre-conference Directors Meeting at Toronto: (Left to right around table) Chief Wayne E. Swanson, Rockford, Ill.; Fred Shepperd, Technical Consultant; Chief Jay W. Stevens, Executive Secretary; Fire Marshall W. J. Scott, Province of Ontario; Chief William J. Taylor, Burbank, Cal.; I. H. Case, Director of Public Relations; Chief Henry G. Thomas, First Vice-President; Chief G. R. McAlpine, President; Chief C. Gray Burnett, Second Vice-President; Ex-Chief Daniel B. Tierney, Secretary-Treasurer; Chief Ray Tiller, Waterloo, Iowa; Chief Walter Messer, Keene, N. H.; Chief Rudolph H. Swanson, Jamestown, N. Y.; Past President; Chief Frank C. McAuliffe, Fire Insurance Patrol, Chicago, Past President; Chief Joseph A. Giammatteo, Glen Echo, Md.

Department, on the subject: "New Developments in Aviation Crash Fire Fighting Equipment." Mr. Krulee, an authority on foam and fog foam, described the most recent crash trucks, nozzles and protective clothing adopted by the Navy Department.

Dr. John Gerletti of the University of Southern California, Los Angeles, spoke briefly on the education of fire department administrators.

Norton T. Ames, President, Southern Wisconsin-Northern Illinois Firemen's Association, the next speaker, took for his topic "Human Relations in a Volunteer Fire Department." In this he compared fire and business organizations on a basis of each needing favorable relations with the public. Mr. Ames prescribed a number of ways whereby volunteers could develop desired public relations.

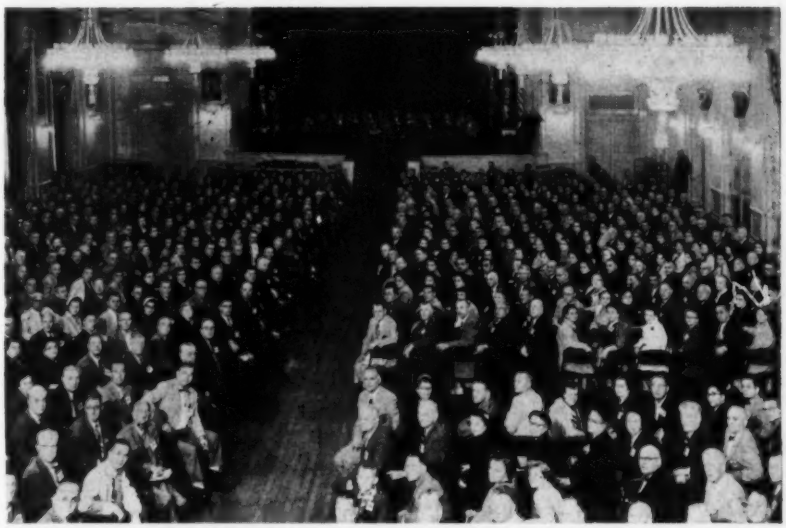
The first of a number of Symposiums came next, the subject of which was "Salvage Operations at Fires," the moderator being Chief Reynold C. Malmquist, of Minneapolis. On his panel were Chief Frank C. McAuliffe, head of the Chicago Fire Patrol; Chief Fred Wells, Fargo, N.D.; Captain Walton of Worcester, Mass., and Chief Arthur Burch of the St. Catharines, Ont., Fire Department.

The main theme developed by this Symposium was that good salvage is good business, from the fire department as well as the public standpoint. There is no better good will builder than good salvage operations, the panel members agreed.

On Wednesday eevning the delegates were transported to the Palace Pier, for a corn and weiner roast, and dancing.

The Thursday morning technical sessions opened with Arnold C. Renner, Chief, Fire Marshal Division, Michigan State Police, the first speaker. Mr. Renner's paper "What Can be Done to Reduce Fatal Fires Caused by Oil Stoves" was not read. Instead, by request, Mr. Renner devoted his time to a discussion of the recent General Motors fire in Livonia, Mich. Unquestionably this costly conflagration will have profound influence on fire protection plans and procedures for large industrial plants throughout the nation.

D. L. Sutherland, Chairman of the Board, Middle Atlantic Transportation Co., Inc., New Britain, Conn., addresses the Conference on hazards involved in the transportation of flammable liquids and explosives.



Concert Hall of the Royal York Hotel was completely filled for the opening session of the Conference.

Fires in Nursing Homes

The second symposium of the Conference followed, with moderator Chief Roi Woolley of FIRE ENGINEERING setting the stage for a panel of speakers, which included Chief Henry Thomas, president-elect, of Hartford, Conn., and B. Richter Townsend, Chief, Bureau of Fire, Division of Safety, New York. The problem of housing and maintaining the elderly and sick is growing more acute and, with it, the task of providing adequate fire protection. The States of Iowa, California and others have set up regulatory measures for this fire protection, but many others have not. New York has just completed a survey of over 700 nursing and convalescent homes, Chief Townsend said, and the conditions found were far from "healthy." Summing up for the panel, Moderator Woolley listed a number of recommendations, including more and better inspections; pre-planning for fire and disaster; increasing fire department response, particularly after dark; installation of approved fire detection and alarm systems, and sprinklers. Percy Bugbee, general manager National Fire Protection Association, and George Swan, Assistant Chief Engineer of the National Board of Fire Underwriters, also spoke on the subject.

The third Symposium, which covered personnel problems, was chairmanned by Chief Lewis A. Marshall, of Providence, R. I. His panel members included Chief Forest Lucas of Dayton, O.; Chief C. Gray Burnett, Ottawa, Ont., first vice-president, and Chief Robert Bogan of Baton Rouge, La.

The lively interest in this important topic drew out plenty of discussion by delegates. It was generally agreed that the manpower problem was, and is, a serious one, particularly where cities face budget limitations, and where modernization of the fire department is necessary. Chief Marshall told about his efforts to meet the situation by relocating fire stations, and reducing the number from 37 to 29. But both he and Chiefs Bogan and Lucas reported they were hard put to compete with wages and social benefits offered by industry.

In this connection, Chief William Fitzgerald, of Seattle, Wash., who was elected vice-president of the Association, author of the I. A. F. C. survey on fire chiefs' salaries, reported the Association will continue its efforts toward uniform terms of employment and improvement of minimum salary schedules.

"Canada's Programme in Fire Research" was the subject of a paper by Gordon Shorter, Engineer, National Research Council of Canada. Laboratories have been set up where fire protection materials and equipment can be tested, and where research can be conducted in fire prevention and fire control.

Truck Transportation Hazards

The Symposium which drew the largest audience, and the most enthusiastic delegate participation, was that titled "How Can We Minimize the Hazards Incidental to the Transportation of Flammables, Explosives and Other Dangerous Materials Over Highways and City Streets."

Moderator Chief Frank Burns of Grand Rapids outlined some of the headaches of the fire service in this connection, after which Dwight L. Sutherland, chairman of the Board of the Middle Atlantic Transportation Co., of New

(*Continued on page* 957)

Relays—To Get Water on the Distant Fire

By HUBERT WALKER*

WHEN the distance from the water supply to the fire scene is too great for a single pumper to provide adequate pressure and volume at the discharge nozzle, pumper relays are used.

Pumpers are in relay (or series) when two or more pumpers are placed in a hose stretch with the discharge of one into the intake of the next pumper.

The use of two or more pumpers in relay is not of recent origin in the fire service. In the New York City fire in 1835 over 500 buildings were burned, hand pumpers were operated in relay from the river to the fire. The pumpers were placed 200 feet apart, as that was the maximum length of leather hose available for each pumper. Fortunately, we do not have such hose length limitations for our fire departments.

We have come to place such dependence on our municipal water supply systems that a potential disaster causing loss in supply is seldom given active consideration. Fire departments should make a survey of the area in which they are subject to call and water supply location should be charted. This information should be immediately available to the officers and drivers of the apparatus. We have been present in areas having Civil Defense tests where preplanning had assumed that city water mains were not available as a source of supply, and they would take draft from the river for pumpers operating in the exercise. When the pumpers actually arrived at the designated points, it was found that obstructions existed making it impossible to take draft at the selected points, and considerable time was lost, nearly an hour, in getting new locations that would provide access for the pumpers. Each source of water supply should not only be charted, but the means of access to this supply should also be recorded, as this turns out to be of equal importance to the water. A pond or river is of little value if it cannot be reached for use.

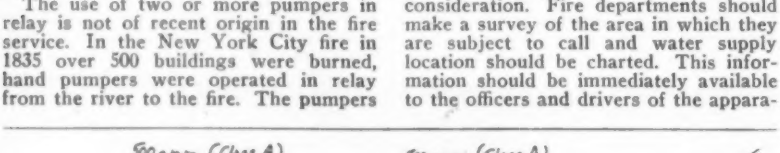


Fig. 1.

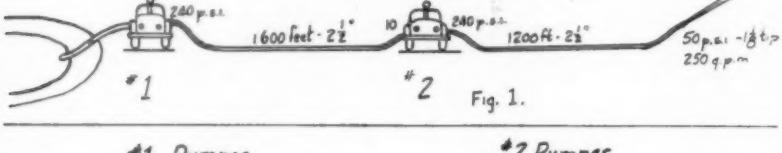


Fig. 2.

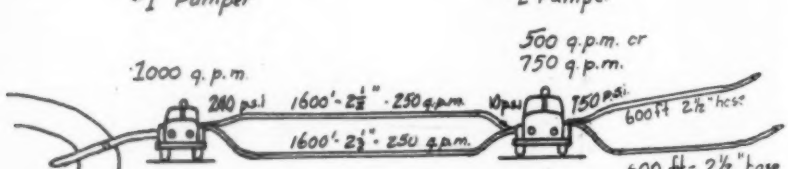


Fig. 3

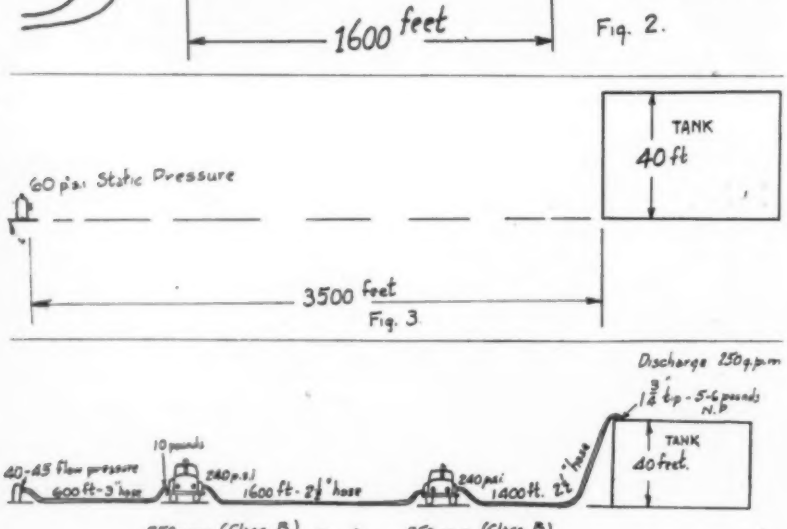


Fig. 4

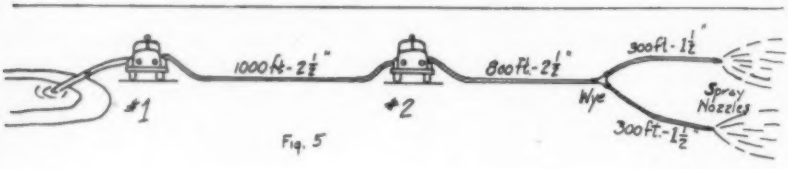


Fig. 5

Civil Defense training tests have served to renew general interest in the technique of operating pumpers in relay. These tests have served to stimulate interest in training for relay operation in some municipalities where they have had no previous need for relay operation, but they can visualize conditions under which they may be forced to use relays.

Many state and provincial fire schools have relay practice as a regular part of their pump operating classes.

In most fire protection districts prearranged plans are in effect for relay operation to control fires in areas remote from a good water source. In forestry fire fighting, relay pumping is frequently used.

Certain fundamental rules of a general nature can be given as a guide for relay pumping operations.

(1) Place the pumper with the largest capacity rating at the source of water supply.
(2) The maximum discharge pressure from any pumper in the relay should not exceed 250 p.s.i.
(3) The inlet pressure at each pumper after the first, should be maintained at 10 p.s.i. to 20 p.s.i.
(4) Relief valves or pressure governors must be properly set on each pump in the relay.
(5) Spacing of the pumpers is controlled by the following conditions:
   (a) Number of pumpers available.
   (b) Amount of hose available.
   (c) Volume of water to be discharged.
   (d) Gradient or change in elevation between each pumper in the relay.
   (e) Capacity rating of pumpers to be used in the relay.

There are definite reasons for all of the above fundamental rules. It is fairly obvious that you cannot get more water from the last pumper in the relay than can be supplied by the first pumper.

*Manager M.F.A. Sales Engineering, American-La France-Foamite Corpn., Elmira, N. Y. Paper presented before 80th Annual Conference of I.A.F.C., Toronto, Ont., Sept. 16, 1953.

When sufficient hose is available, there are many times in a two pumper relay that the first pumper has large enough capacity, that parallel lines of hose or siamesed lines running parallel, can be used to greatly increase the water supply to the second pumper, permitting not only a 2½ inch line to be used, but perhaps two 1½ inch lines as well to achieve a maximum of effectiveness.

The pressure limitation established in No. 2 is for protection of the hose. While new hose may be static pressure tested for 400 p.s.i. to 600 p.s.i., the normal working pressure is approximately ½ of the test pressure. Some factors of safety must be retained in the hose layout as a protection against a sudden pressure rise from a rapid nozzle shutoff at the end of the line.

The need to maintain a positive inlet pressure (No. 3) on each pumper is to prevent drawing a vacuum on the supply line.

The setting of relief valves or pressure governors as outlined in No. 4 is a very important "must" for every pump in the relay. If this is not done, burst hose may result which puts the whole relay out of operation. Much valuable time is lost in replacing burst hose in relays because the distances are usually great and there are occasions when spare hose may not be available.

The items listed in No. 5 for controlling the spacing of the pumpers is a list that indicates the variables that exist in a fire. From this list it is obvious that any specific rule or formula for spacing the pumpers is entirely worthless unless all of the variable factors given can be controlled, which in our experience is impossible. The conditions existing at the scene of the fire, together with the equipment available, will determine the spacing according to the judgment of the officer in charge.

In Figure 1 we have shown the maximum recommended length of lines in a two-pumper relay, operating on level terrain. This layout will provide one good fire stream discharging 250 g.p.m. and is suitable for a 1⅛ inch tip solid stream, or for any of the standard 2½ inch combination solid stream and spray nozzles.

Note the 500 g.p.m. pump must be Class A to provide a sufficient volume of water at 240 p.s.i. discharge pressure. Any 750 g.p.m. pumper or one of larger capacity can easily operate this relay.

If a 1000 g.p.m. pump is available for the first unit, double the volume of water can be obtained giving two discharge lines from the second unit. In Figure 2, note that the lines from the second pump have been shortened to 600 feet to get within the capacity rating of the second pumper. If a 750 gallon pumper is available for the second pumping unit, the discharge lines can be increased in length.

There are so many combinations of pumpers and hose layouts possible to meet a given set of conditions that it is impossible for us to consider other than basic control factors.

A Civil Defense booklet or manual has recently been published which includes instructions for relay pumping. A formula is given for pumper spacing of different units in the relay. No allowance is made for variable factors that always exist, which must be considered. Such formulas are confusing and misleading, and fail to utilize the equipment available to a maximum.

Where 3 inch hose is available, it can be put to excellent use in reducing friction loss.

Recently at Vestal, New York, the California Oil Company required a water test on a new storage tank installation. Clear water was required for the test, and the nearest hydrant was 3500 feet away. Chief Buckman of Binghamton, New York loaned two 750 gallon pumpers rotary type, 1921 vintage, to do the job. The problem confronting Mr. John Sedor, Instructor for the Binghamton Fire Department is shown in Figure 3. What layout would you use if this were a fire?

The layout used by Mr. Sedor shows good judgment and knowledge of hose layouts. Figure 4 is the layout he used.

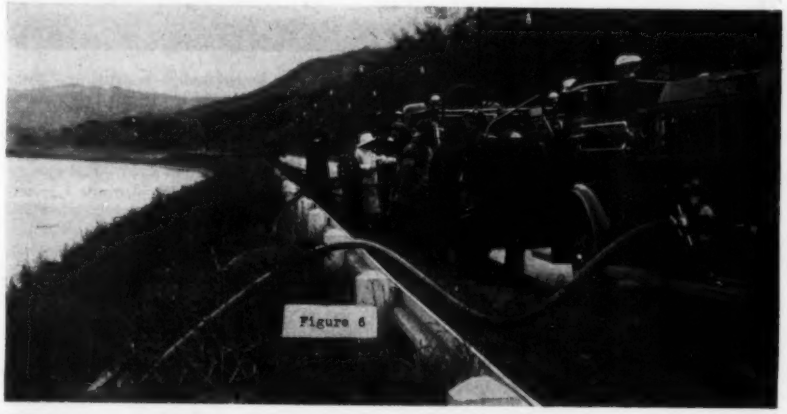


Figure 6

Figure 8

Figure 9

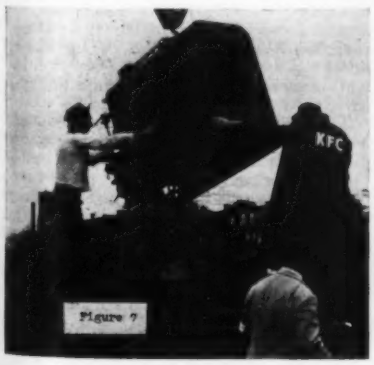


Figure 7

Note the use of 3 inch hose to take full advantage of the hydrant flow pressure and shorten the lay of 2½ inch hose. The pumps being rotary type would not fully utilize the hydrant pressure. The pumps were Class B rating, therefore only pumping 250 gallons at 250 p.s.i. pressure.

The shortened discharge line from the second pumper reduced the friction loss to provide the required pressure to raise the water to the top of the 40 foot high tank.

Incidentally these two pumpers operated this relay for 72 hours without a single shut down, and pumped 1,080,000 gallons of water. The crews operated in three 8 hour shifts during this period.

On one of those rare times when the writer travelled without a camera, a fire in a rural area was observed. The house was a large square dwelling with 20 rooms and the entire attic was involved, with a large hole burned through the roof on arrival of the volunteer fire department.

The nearest water was about 1600 feet away. The first company laid their hose from the water source with the second company connecting after laying 800 feet from the fire scene to reach the end of the first unit's line. A wye and two 300 feet lines of 1½ inch hose completed the layout. Combination spray and straight stream nozzles were used and the fire was out in less than 30 minutes.

Figure 5 shows the layout used. The writer was impressed with the speed in which the relay was put into operation and the effective work done by that fire department. Previous training was very evident by the speed and efficiency with which every operation was completed.

You will note how logically the available equipment was utilized. As we have stated previously, the Civil Defense drills have a very practical value. Figure 6 shows the start of a double line of pumper relays. Eleven pumpers were in each relay line to relay water nearly two miles.

The lift from the river to the inlet of the first pumper in each relay was nearly 25 feet, vertical height. While the pumper could have drafted water, it was decided to use a 500 g.p.m. motor and pump unit at the edge of the river to supply both relays. Figure 7 shows a crane lifting this unit over a flood wall. Figure 8 shows small portable units, used to lift the water up to a reservoir from which the pumpers took suction at a third relay operation. This reservoir is shown in Figure 9. Note it is made by stretching salvage covers over ladders on edge to form a triangle.

A very practical part of this exercise was to space the pumpers approximately 1000 feet apart as each pumper carried 1000 feet or more of 2½ inch hose. The availability of portable units was important as vertical lifts of over 30 feet were encountered at several points where it was necessary to get water to the first pumper in the relay.

A very valuable aid in successful relay operation is the short wave radio. Figure 10 shows a forestry truck impressed into service during relay operations. Orders and instructions transmitted in this manner assure a proper function throughout the entire operation of relaying water to the distant fire.

N.B.F.U. Reports New High in Fire Losses

The National Board of Fire Underwriters recently reported that fire losses in the United States for the third consecutive year are at an all-time dollar high and, for the first time in history, are expected to reach, if not break through, the billion dollar mark by the end of the calendar year.

The report was made by Lewis A. Vincent, N.B.F.U.'s general manager, in connection with Fire Prevention Week activities to be conducted in communities throughout the nation, October 4-10. Fire Prevention Week is an annual observance designed to focus public attention on the ever-present need for fire safety and protection at the local level.

According to Mr. Vincent, the nation's staggering fire losses are the result of over a million fires of all sizes: small ones in rubbish to the large spectacular fires that occur annually in the U. S. In addition, nearly half of them occur in the home. The loss of 11,000 lives annually as a result of fires, many of which are due to carelessness, he said, makes it essential that everyone recognize the importance of ordinary safety measures.

In considering the losses for this year, which are averaging more than $70,000,000 monthly, Mr. Vincent pointed out this is about $2,400,000 daily.

"These are the bald figures," he said. "Behind them," he added, "are the innumerable tragedies of homes and possessions lost and of sudden death."

Fire, he noted, is man's most useful force, but it is never completely servile. A moment's carelessness, a brief lack of respect for it can cause a lifetime of grief, he said.

The high level of fire losses is a drain on the resources of the country and must be controlled. The effectiveness of modern day fire protection and fire prevention methods is reflected in the fire loss record of the past half century. Large as the loss is, the current relationship between losses and property subject to damage points up the efficacy of the means now available to control this national fire waste.

One explanation for the continuing high trend is that various factors in the nation's economic life are responsible, among them rising prices, mounting production, and greater values exposed to fire.

Another explanation takes into consideration the nation's rise in population, the change in the purchasing power of the dollar, particularly in the last 10 years.

Viewed from either perspective, the National Board points out, the picture is not as somber as the stark figures would indicate—yet somber enough to cause grave concern to most Americans.

The Causes of Fires

What are the causes of these million-more fires?

In the last 10 years, for instance, matches-smoking caused 25 per cent of all fires; misuse of electricity, 12 per cent; petroleum and its products, 9 per cent; stoves, furnaces, boilers and their pipes, 7 per cent.

Also, overheated or defective chimneys, flues and so forth, 6 per cent; ignition of hot grease, 4 per cent; hot ashes and coals-open fires, 3 per cent; open lights, 3 per cent; spontaneous ignition, 2 per cent; sparks on roofs, 2 per cent; gas, 2 per cent; rubbish and litter, 2 per cent; sparks from machinery, 1 per cent; sparks arising from combustion, 1 per cent; explosion, 1 per cent, and miscellaneous causes, 4 per cent.

Other causes were exposure to fires originating off the premises, 8 per cent, and lightning, 8 per cent.

Historic Inn Destroyed

The Carriage Drive, fashionable Colonial style restaurant at Madison, Conn., converted from an old mansion, was destroyed by fire on Aug. 23. Damage was estimated at $150,000.

Fire Chiefs Elton Sheehan, of nearby Guilford, and Ernest Gauer, of Madison, said the blaze probably was started by a discarded cigarette. Hundreds of antiques, on display inside the restaurant, also were destroyed. The flames left only a shell standing. Five firemen were overcome by smoke while fighting the fire.

The restaurant, fire officials reported, was closed an hour before the blaze was discovered in the east wing of the building by a passing motorist. Only employes, some of whom live in the upstairs section of the building, were inside, but all escaped before the flames shot through the old structure.

The restaurant, situated on a small knoll, was recognized by many travelers because of an old horse-drawn carriage which stood in front of the building.

TOM MAGNER.

Foresight Prevents Big Fire From Getting Out of Hand

By ARTHUR P. HANDLEY

FIREMEN are often asked, "What makes a big fire BIG?" The all-inclusive answer would take several pages, but most often the answer to a specific fire would be a delayed alarm or merely the combination of two or more relatively unimportant events or conditions. In the case of the Sterling Paper Products fire on May 8th, some of Los Angeles' unusual weather sneaked in and helped make this fire a BIG one.

Take a smoldering cigarette between two bales of waste paper, add a few confused employees, whip with 22 mph gusty winds and you have the recipe for a four alarm total loss blaze.

After five days of premature summer weather, which saw the thermometer rise to the year's high of 92°, and the humidity drop to an all-time low of 3%, the pleasant 70° temperature and 20% humidity on the evening of the Sterling Paper fire were welcome to overworked firefighters. Warm desert breezes, punctured with gusty winds from the Northwest, had cleared the atmosphere to the delight of the Air Pollution director, but these same gentle breezes gave Los Angeles its worst week for fires in its history—963 actual fires.

Preliminary Size-Up

Picture a heavy manufacturing district with blocks six-tenths of a mile long. Behind each row of buildings, a railroad spur with several box cars dropped off for loading and unloading. Most of the factories have adjoining walls, making firefighting entry convenient only from the front or from the roofs of adjacent buildings. Near the north end of one of these blocks was the Sterling Paper Products Company. Immediately south, and in line with the progress of the fire, lay the Roth Furniture Company. An eighteen inch separation between these buildings was quite uncommon in this heavily-built section, but in the opinion of several fire experts it contained just the right degree of safety to prevent a true conflagration. Outside the north wall of the Roth Furniture Company a string of 18 sprinkler heads had been installed. Eighteen years ago Charles Roth had the foresight to provide a water curtain that would protect his corrugated sheet iron factory from his next door neighbor.

The Sterling Paper Products Company was a brick and frame structure 158' by 175', with a combination reinforced arch (Summerbell type) and sheet iron roof. Some distance below the roof, fluorescent lights kept the area above well-shielded from inquisitive eyes. They provided quite an area for the retention of unseen heated smoke and gases. The receiving and shipping of paper products were handled along the north end of the plant, while the offices and machines for punching out paper plates and other picnic utensils lay to the south end. A railroad box car stood outside the receiving section, and employees had been unloading paraffin coated paper cups from it all day. In front of the building at this same end was the loading dock where delivery trucks had been busy most of the day.

Fire is Discovered

The last of the day shift employees left the plant at about 5:00 P.M. Since production was the main concern of the evening shift, they seldom ventured into the shipping-receiving section. A bell at 6:40 P.M. returned them to their duties after a ten-minute coffee break. It was then that smoke was first noticed. A search was made to locate its source. A few feet from the truck loading dock two smoldering bales of paper trimmings were discovered. An attempt was made to extinguish the small fire by using portable hand extinguishers. A nearby interior standpipe system was completely ignored. After exhausting several extinguishers, a hydraulic fork lift truck was brought into action. One bale was scooped up and carried through a 15'

L. A. F. D. Photo

Paper plates and picnic utensils added fuel to this wind-whipped fire which threatened heavy manufacturing district in Los Angeles.

L. A. F. D. Photo

Fire originating in shipping-receiving section of plant (left foreground) involved 13 other buildings, automobile, railroad freight car, numerous grass plots and utility poles. Flaming paper plates whipped through the air were described by one fireman as "fiery flying saucers."

fire door which had been opened to allow the noxious smoke to escape. En route to the street several large chunks of burning litter dropped from the bundles. Still unable to extinguish the fire, one employee called the plant manager and asked his advice. His wisdom-packed reply was, "If you can't put it out yourself, call the Fire Department."

The Alarm

At 7:02 P.M., approximately twenty minutes after its detection, the fire was reported via an ADT alarm system located on a plant across the street. The routine assignment of three engine companies, a truck and salvage company and the Battalion Chief were dispatched. The first engine company to arrive on the scene came in from the south. The captain in charge reported that only a small amount of smoke was visible, but due to the potential hazard of the area, especially bad in view of the relative low humidity and gusty winds, he ordered two 2½" lines laid from a double 4" hydrant in front of the Roth Furniture Company. While still in the process of laying these lines, fire suddenly boomed out of the opened fire door and across the street.

Earning a Day's Pay

Within twenty minutes after the first report of fire, twenty-two fire companies were on the move. The Division and Headquarters Assistant Chief, Arson, Fire Prevention, Photo, Training, the metropolitan newspapers and television cameramen were on their way.

Aside from the seven companies which moved up to fill existing vacancies, the rest of the firefighting units were on their way to 6511 McKinley. On their arrival they divided themselves into two teams. One team aggressively attacked the main body of the fire while the other prevented its spread and extinguished the many spot and exposure fires. To say these were numerous is a mild understatement. Thirteen structures, several grass fires, and two mobile units became involved with fire before the fire was under control. In general the units approaching from the south, the leeward side, worked on exposures and spreads, while the men and equipment arriving from the north and windward side attacked the main fire.

First-in Engine 33's crew took one of their lines directly into the Roth Furniture building and then out a north mezzanine window to hit the approaching fire. Their other line was taken immediately to the roof, via a ladder at the front of this same building. Engine 6 followed their path with two more 2½" lines, one on the roof and another through the building and out the north mezzanine window. Engine 57 in a like manner followed through the window thoroughfare. Their other line covered the rear interior of the building. Also appearing as a member of this southern assault team was Engine 7. With one 2½" line they attacked the southeast end of the fully-involved paper plant. Truck 66, laddered, ventilated, overhauled and did some of the salvage work in the furniture plant.

Engine 21, the second-in company, led the northern task force and with one line attacked the main body of the fire at its source. Their second line was hooked up to the intake on their wagon battery which had been spotted in front of the Sterling Products building. Engine 31 followed with two 2½" lines hooked into 21's wagon battery and an additional line was laid to protect the exposure across the street at the Cole Metal Products Company. Engine 30 with two more 2½" lines, worked on the main body of fire through the opened fire door on the spot that was apparently the original source of this four alarm blaze. Also approaching from the north was Engine 14, whose crew took two 2½" lines down the railroad spur which intersected McKinley about two hundred feet north of the building. Their attack on the fire was at the northwest corner adjacent to the now empty railroad car. Directed to strike at the blaze from the rear, Engine 27's crew approached from one block west, laid two 2½" lines through the Signal Oil distributing plant. They used these lines to extinguish a spot fire in a shed on this property, the railroad box car and to further protect the rear of the threatened Roth Furniture plant. Salvage 24 approaching from the north took one 2½" line from 66's pumper into the front of the Sterling plant. Later they joined Salvage 14 in salvage work inside the furniture company. Truck 3 as a member of the northern team joined in the fight to control the spread of fire from flying sparks, embers, and flaming paper plates whipped through the air south of the involved structure.

Nineteen 2½" lines with at least four

(Continued on page 962)

L. A. F. D. Photo

All that remained of the Sterling Paper Products Company after a devastating fire originating in baled waste paper swept through the plant and threatened two blocks of an industrial area between Gage and Florence, Los Angeles.

L. A. F. D. Photo

Water curtain provided by sprinklers played a key role in preventing a major conflagration. Its operation kept heat from igniting furniture stacked against the sheet iron wall of a large furniture factory at left.

Controlling Hazards of Materials in Transport

A Symposium

LAST month FIRE ENGINEERING published the first installment of a Symposium on the problem of controlling the hazards incidental to the transportation of flammable liquids and explosives. Reports from fire chiefs of 16 cities were quoted covering four main questions: (1) control exercised by the fire department over the movement of trucks carrying these flammables and other dangerous materials over the city streets; (2) what limits on the movements are found in the communities of respondents; (3) what fires, if any, chiefs have encountered involving these hazards in recent years and (4) what recommendations fire chiefs have to offer to solve the problem of transporting these hazardous materials over our highways and byways.

In this installment another group of chiefs submit their versions of the problem, and offer their recommendations.

The editors would like to point out that although the majority of chiefs quoted head municipal fire departments in cities of 50,000 or over, this does not necessarily mean that only such size municipalities encounter these hazards. They are met with in every community of every size. The chiefs are quoted, however, because of their wider experience with the problem, and because their form of government permits, the passage of enabling legislation. The editors would be glad to hear from other chiefs, particularly those in smaller communities, who care to express their ideas and beliefs.

Howard L. Day
Chief Engineer Fire Department
New Orleans, La.

We have a fairly good control over the movement of trucks carrying flammable liquids, explosives and other hazardous materials through the streets of our city. The methods used are explained in Ordinance 16879, C.C.S. covering the subject matter.

We do have limited movement—not to certain specified streets, but rather we prohibit movement on certain specified streets and prohibit movement in high value areas during specified hours (section 137 of the Ordinance).

During the past year we have had three collisions in which such vehicles were involved. A non-conforming vehicle in a collision with a streetcar spilled 1,200 gallons of high-test gasoline at the very door of our city hall. The Fire Chief and members of this division (Fire Prevention Div.) being present, the hazard was quickly removed by Fire Department personnel without resulting in a fire. Another vehicle was involved in an accident on the highway in a residential section, turned over without spilling any gasoline, due to over-turn protection equipment. A third vehicle was involved in an accident with a private automobile, resulting in the death of the automobile driver. The tank truck turned over but did not spill any gasoline, due to its protective equipment.

Due to the large variation in regulations from community to community, and the large inter and intra-state movement of these vehicles, we are firmly of the opinion that we should have a nationally adopted and recognized regulation which would mean these trucks from other areas entering our specific areas would offer the same protection to the public that local vehicles are forced to provide.

Michael H. Lotz
Chief Engineer, Fire Department
Baltimore, Md.

The movement of flammable liquids through the streets of the City of Baltimore is governed by the Fire Prevention Code insofar as construction of the tank truck and the capacity of the tanks are concerned. The construction of tank trucks for petroleum gases is also governed by the Fire Prevention Code. No control is provided over the movement of trucks carrying flammable liquids. Explosives passing through the city are governed by the Bureau of Highways who have special rules and regulations governing the explosives. An ordinance has recently been passed governing the handling of explosives in the Port of Baltimore about harbor docks and wharves.

The transportation of compressed liquids and gases is governed as to the routes to be taken when passing through the city by the Chief of Fire Department.

When a truck load of explosives is about to pass through the city, the truck waits at the city line for a police escort, and the Fire Department is notified of the route to be taken.

The only fire in recent years, occurred early in the morning of December 15, 1947, when two tank trucks, one empty and the other loaded with fuel oil collided head-on and jack-knifed at a wide street intersection. The cargo and fuel tanks of both trucks were ruptured and gasoline and fuel oil ignited and covered the intersection. It was necessary to sound a third alarm to confine and extinguish the fire.

Only one exposure was involved with fire, a three-story brick tavern and dwelling, causing the burning of window and door frames and edge of roof.

The fire was extinguished by the use of straight streams and the oil on the street and tank trucks was confined and extinguished with fog nozzle. There was one other exposure—a four-story concrete factory building which did not become involved. Two straight streams were used to form a water curtain to protect the building.

Indianapolis firemen wade through debris to smother fire and fumes after a truck load of phosphorous grenades exploded on September 17, 1953, in open country near Indianapolis. Nobody was hurt seriously.

In my opinion, the ultimate answer to this problem would be to compel through-trucks loaded with flammable liquids to take certain routes, and if possible, avoid passing through the congested part of the city, and to limit the tank trucks as to capacity.

George Schlotterbeck

Chief, Division of Fire
Hamilton, Ohio

We certainly are concerned with the movement of flammables and other hazardous materials by trucks through our city streets.

Our control over tank trucks in our city at the present is very limited. At the time of this writing we are using the following method:

In case we spot a defective truck that does not conform to the City and State laws, as to construction, length, carrying proper type of fire extinguishers, and are in good working order, leakers, etc., they are handled the same as any other fire hazard. We get them off the street to a safe place and have the load transferred to another truck. They are also cited if they fail to stop at railroad crossings. But we do not have a City Code calling for regular safety inspections.

All tankers, unless making local deliveries, must follow the regular truck routes. This condition is rapidly improving, although at first it got away to a slow start.

We have been most fortunate in Hamilton not to have had a disaster of this type. In the past few years all that we have had was one ruptured tank and a few small fires in brakes and motors.

In my opinion the following would help: Definite routes should be laid out, and followed by these trucks, around the city if possible, and never through the high value district.

They should be limited to a semi-trailer, and never be permitted the four wheel dolly or trailer.

A thorough inspection every three months of all this equipment by the State.

All trucks coming into the State from other states shall be inspected and shall carry the approved tag or seal.

Drivers of this equipment should be more thoroughly screened before being hired.

I don't believe this type of equipment should be permitted on the crowded streets and highways on holidays, or on the weekends.

We do have a large number of tanker trucks going through our City, due to the proximity of the Ohio River barges, and the large refinery at Hooven, Ohio, both within twenty miles of Hamilton

Eugene W. Fields

Chief, Fire Department
Omaha, Nebr.

Under our city charter the Fire Chief and Police Chief have joint responsibility for control of the movement of trucks carrying flammable liquids and explosives through the streets of our city.

We do limit movement of gas and explosives trucks to specific streets which are labeled "Gasoline Transport Route." We attempt to route gasoline trucks around our hazardous districts. However, because of the fact that up until recently we had only two bridges across the Missouri River, we are convoying explosive trucks over the shortest route through our city. This happens to be L Street. We are not happy about this route because it takes the trucks through our stock yards and packing house district.

We have had some serious fires involving gasoline transport trucks.

In 1951 a gas transport went out of control and smashed into Kellogg Cereal Mills, exploding, setting the mill on fire, killing the driver of the truck, and endangering the lives of many employees of the mill.

In 1944 we had one transport turn over and take fire on a main highway. In 1945 we had another truck overturn and cause a fire.

On one of our main highways there was an accident in 1946 in which no one was killed, but there was considerable damage to property.

We have had several other instances where damage was done to adjacent property, but no one was killed.

This certainly is a problem for us. Just two weeks ago we had a conference with the truckers of the city of Omaha on the routing of explosives trucks. We have many trucks moving through our streets day and night to the munition plants in our area. Though we have had no serious fires involving explosives trucks, there have been some unfortunate accidents in our vicinity which would have been disastrous in Omaha.

Since we have two new bridges over the Missouri River, we are attempting to by-pass our city with all trucks carrying explosives. It has not been worked out but is in the process of being developed.

Trucks carrying flammable loads, of course, present a difficult problem. In practically all cases they are not moving through our city but are coming into the city to be loaded. Therefore, they must travel our city streets. About all we can do is to by-pass our congested areas. Of course, residents do not like the trucks rolling down their streets either, but it seems to be a problem that can only be regulated and not abolished.

The things that we are most concerned about are the handling of explosives by both truck and rail. Any accident inside the city limits could create a disaster.

No definite solution that I know of has been arrived at.

E. E. White

Chief of Fire Department
Anniston, Ala.

We have a city ordinance that prohibits the movement of trucks carrying flammable liquids, explosives and other hazardous materials through the main business street of our city.

We haven't had any catastrophes, resulting from accidents involving such trucks.

I believe that if a city ordinance or state legislative act were enacted to prohibit the movement of these trucks carrying the above materials through our main business streets that this great hazard would greatly be reduced.

E. P. Feaster

Chief of the Fire Department
Lincoln, Neb.

In our city the Police Department sends out courtesy letters to all haulers carrying flammable liquids, explosives and other hazardous materials through the streets of Lincoln, with a suggested route designated. Certain streets are specified in this courtesy notice.

Our experience has been good with regard to accidents and fires resulting from such trucks.

In my opinion, the answer to the problem would be a City Ordinance enforced by the Police Department which would make truck drivers use the designated route through the City.

Zephrin F. Drouin

Chief of the Fire Department
Lewiston, Maine

At the present time we have no control over the movement of trucks carrying flammable liquids through the industrial or commercial heart of the city. Explosives and other hazardous materials are convoyed through the city by the Police Department through routes of less traffic. We have frequently considered this problem for an

(Continued on page 965)

Ammunition Fire Provides Aerial Display

Blasts and flames light up the sky when an ammunition dump at an army anti-aircraft station in Chicago was touched off by lightning on July 5. Police evacuated persons from nearby homes as a safety measure.

TELEPHONE EXCHANGE BLAZE LEAVES CITY PREY TO FIRE

There Being no Fire Alarm System, Public Resorts to Primitive Means for Summoning Fire Department

Editor's Note: **Within the past year there has been considerable agitation concerning the respective merits of the long established municipal street fire alarm box system and the private telephone for transmitting alarms of fire to the fire department.**

This agitation has been fanned by the decision of one large city and a few smaller ones to substitute the commercial telephone system for the orthodox municipal box system and by the entry of the telephone companies into the fire service communications field, with consequent solicitation of all forms of communications, including the complete leased radiophone system.

It is not the intent of this article to debate the respective values of these communications facilities or of the wisdom of a municipality owning and operating its own fire alarm service as compared with leasing it out to a commercial organization. The following message is published to describe an actual situation that confronted a small town fire force when fire struck its telephone exchange building. It must be admitted that some fire alarm offices are fully as vulnerable to fire as the telephone company described in this incident. However, it is also a fact that almost without exception municipal fire alarm headquarters which depend upon street boxes for fire alarms have been free of fire, although they have been partially or wholly rendered inoperative for periods due to hurricane or flood or other natural disaster, just as have telephone systems.

The data upon which this account is based was supplied by Lester L. Williams, M.D., Colorado Springs, Colo., who states that his source of information was the Mt. Vernon, Ohio, "News" and Fire Chief Carrol White of that community, who had charge of fighting the fire and who authenticates the factual data furnished this Journal.

ON Friday, May 22, 1953 at 3:10 P.M. an alarm of fire was turned in by telephone for the Mt. Vernon Telephone Co. building on E. Gambier St., a three story brick structure in the business district of the town.

The fire started in a third floor room where 25 girls and women were working at switchboards, and at this writing its origin has not been determined.

As smoke and flame filled the room, Chief Operator Nellie McMillan called the fire department while the operators fled. The department, under command of Fire Chief Carrol L. White, responded promptly from its station just three blocks away, and employed a total of 5 lines of hose.

Water pressures were good and all lines were hydrant fed. The paid department was aided by the industrial fire brigade of the Shellmar Products Company, and by volunteers.

The fire shortly broke through the roof, but actual fire damage was limited to the third, or top, floor. Water damage to the lower floors of the building, however, was considerable. There was no extension to exposures.

The total loss at this fire is given as $250,000.

The third floor of the building was occupied by manual operated telephone equipment, which was destroyed by the fire. On the second floor was located dial equipment and new toll switchboards, in process of installation, and due to be placed in service within a month. This equipment was heavily damaged by water.

The net result of the fire was total disruption of telephone service for the city of Mt. Vernon and surrounding territory. Inasmuch as all calls for the fire or police departments, or for medical attention, were carried by telephone, the situation was loaded with dangerous possibilities.

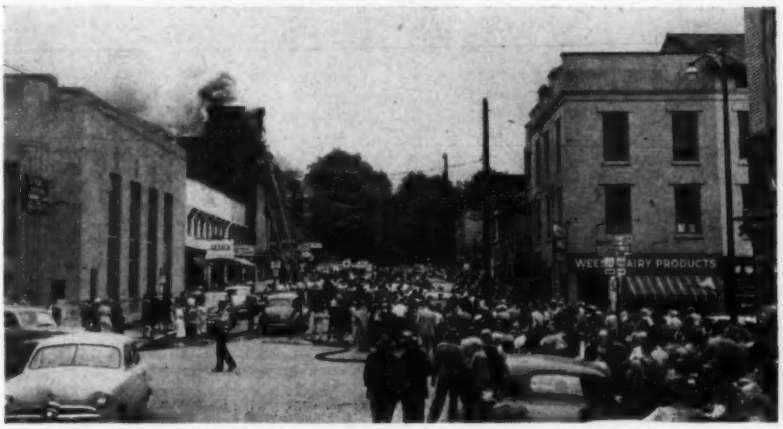
In the emergency, police and state patrol radios were used to provide limited communications. The biggest worry to city officials was the fact that there was no way of reporting fires quickly. As soon as possible the telephone company set up a 100-line common battery switchboard connected to 100 telephones strategically located throughout Mt. Vernon. The only way for a householder to report a fire, however, was to go to the nearest of these telephones in service, or to a radio equipped police car if one could be located, or to drive directly to the fire department.

Such delayed reporting of a fire would be an invitation to disaster, but Mt. Vernon was lucky and, during the period of deficient communications, no serious fire developed. On May 27, Mrs. Robert Smith noted sparks flying from an electric receptacle of her farm home. She pulled the fuses and drove 7 miles to the fire station. The rural truck responded and found the wall behind the receptacle warm, but no fire.

By July 6 dial equipment was installed, full telephone service restored and the emergency safely passed.

It should be added that at the height of the fire, Captain David Ross and Fireman Jack Parker were forced out of the third story. Parker managed to drop from the third floor to a ledge 8 feet below, where he awaited rescue by ladder, but Ross fell to the ground. His fall was broken by James G. Ansel, who threw his body under the falling Ross. Both men were injured.

Officials believe that had a fire alarm system been in operation, the danger of a serious fire from delayed alarm because of lack of telephone communications would have been negligible.



Mt. Vernon Telephone Building fire in its early stage.

Arizona Fire School Meets

The First Annual Arizona State Fire Training School, sponsored by the Arizona State Department of Vocational Education, Phoenix Technical School and the Phoenix Fire Department, will be held on October 15, 16 and 17, 1953, in Phoenix. Classes will be conducted at the Phoenix Technical School, 525 North 7th Street, and demonstrations will be presented at the Phoenix Fire Department Drillgrounds. Attendance will be open to volunteer, paid and industrial firemen; fire chiefs, officers, city officials and persons interested in the prevention and control of fire.

International Rescue Association to Meet

The Sixth Annual Convention of the International Rescue and First Aid Association will be held in Greensboro, N. C., Oct. 30-31 at the O. Henry Hotel. The Greensboro Life Saving and Rescue Squad will be host to the gathering, which will hear addresses by Chief G. B. Horton, Rescue Instructor, Olney, Md., and Dr. C. R. Stephen, Prof. of Anesthesiology, Duke University. There will also be panel discussions, business sessions and entertainment. A banquet will be held on the 31st.

The president is Donald J. Luther, of Dunellen, N. J.; the recording secretary, Harry A. Eckert, R.D. 1, Broston, Pa., and the Executive secretary is T. W. Hart, 1432 Martine Ave., Plainfield, N. J.

EPIDEMIC OF INCENDIARY FIRES GIVES BOSTON DEPT. A WORKOUT

Six Major Fires, Occurring Within A Two-Week Period, Tax Facilities of the Department

By Julian Olansky

PERIODICALLY through the years, cities like Boston, experience a series of fires frequently traced to arson. On Saturday night, June 14, 1953, fire headquarters received some six box alarms from the Beacon Hill and West End section of the city. These alarms proved to be of no consequence. Sunday morning, June 15, at 3:40 a.m., Box 1385 was transmitted. Engine Co. No. 10, the first due company at the fire, reported to Fire Headquarters that they had a working fire in a five-story apartment building on Beacon Street. Within a few minutes the whole top floor was involved.

The District Chief ordered a second alarm. Flames were shooting through the roof. Firemen were forced to fight the fire from aerial ladders while crews in the building worked their way up.

Chief of Department Stapleton, upon reaching the scene, realized the difficulties in fighting a fire at such a height and ordered a third alarm and two extra trucks. The fire was brought under control in about one hour. This building was the home of Mr. and Mrs. Arthur K. Howard (active in Civil Defense). Valuable antiques and furniture were destroyed in the blaze. The damage was set at $25,000. The cause of the fire was attributed to an arsonist. Matches were found in the front hallway and throughout the building. The building was unoccupied at the time.

Three alarms were sounded for this apartment house fire. Photo shows men of Engine Co. 26 trying to get line into the fifth floor. Intense heat drove them back.

Four alarm Boston fire sweeps through top floor of five-story apartment house. Three lives were lost in this blaze. Photo shows rear of building.

On Tuesday morning, June 23 at 6:40 a.m., Box 1532 was transmitted. The District Chief on arriving at the scene reported a working fire in a five-story apartment house. For a while it was feared that Boston might have a holocaust. The entire building was completely involved. Flames were spreading quickly upward from the basement through all floors. A dozen trapped people on the top flors were calling from their windows to be rescued. A second, third and fourth alarm were quickly ordered. Trucks 26 and 24 raised their aerial ladders to the top floors and some dozen thirty to fifty-foot ladders were used on the lower floors. By now the fire had burst through the roof. Firemen had a difficult time setting up ladders and getting hose lines into operation at the rear of the building. The rear alley behind the involved building was some twenty-five feet below street level. Flames were rising from the rear top floor windows and the roof. Chief Stapleton ordered Engine Co. No. 23 to put their deluge gun into operation. They directed a heavy stream of water into the top floor.

Men of Rescue No. 1 found two occupants dead on the third floor and one on the fourth floor. It was feared at this time that many more had been trapped on the upper floors. Excellent work on the part of the Boston fire fighters kept the toll to three dead and nineteen injured. Two hours later the fire was brought under control. The Fire Dept. Arson Squad was called immediately.

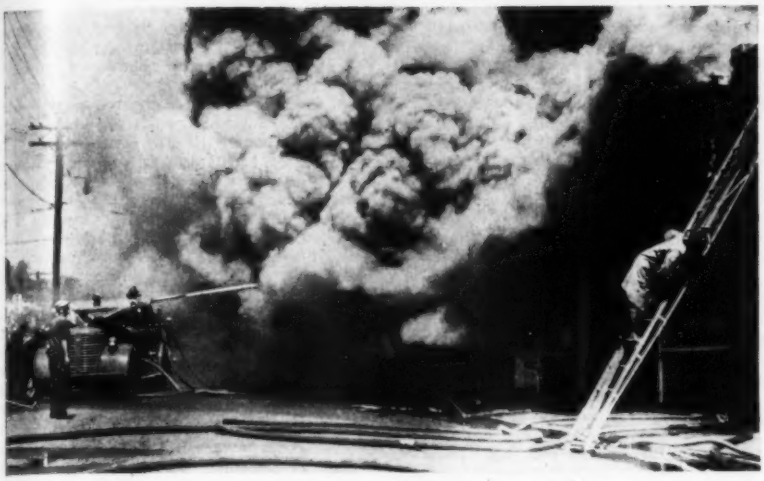
Boston Police and Arson squadmen quickly rounded up all local suspects. Forty-eight hours later a telephone tip was received in regard to the janitor of the building. He was immediately picked up and after a few hours of questioning he admitted that he was paid by the owner of the building to set the blaze. These men were indicted by the grand jury on a second degree murder charge.

Sunday morning, June 28, at about 1:00 a.m., Fire Headquarters was notified by the Police Dept. that there was a fire in the rear of the International Cafe. Box 722 was transmitted for this fire. Firemen arrived to find the rear of this one-story building all involved. A second alarm was ordered. Damage was set at $20,000. The Arson Squad was called to investigate this fire.

On Monday morning at 1:55 a.m., Box 3113 was struck for a fire in huge piles of rubber tires in an open yard junk concern. Three alarms were sounded to bring the blaze under control. Damage was unknown at the time.

Monday night, June 29, three alarms were transmitted on Box 2235 for a fire in a two-story block of stores. Damage was set at $20,000. The arson squad was called to investigate this fire also.

Saturday afternoon, July 4, Fire Alarm transmitted a mutual aid signal for the City of Quincy. The fire involved a block of stores on Newport Avenue. Upon arrival at the scene, firemen found that the fire had gained rapid headway in the basements of these stores. Firemen were unable to enter the stores because of heavy smoke. Cellar pipes were used through small cellar windows in the front of the



Fire destroys block of stores in Quincy, Mass. Photo shows Quincy Engine Co. 4 operating deluge gun into the heart of the fire.

stores. After thirty stubborn minutes had passed, it seemed that firemen were getting the blaze under control. Most of the fire had been knocked down and spectators started to leave, believing that the fire was out.

Yet one little area of fire had apparently gone unnoticed by everyone. It had worked its way up through the walls and spread quickly under sections of the roof. Then with a great surge it roared forth, flames and great clouds of smoke pouring from the buildings. Wagons were quickly moved and firemen again moved in to fight the roaring blaze. A special call was sent into Quincy Fire Headquarters which sent two more engine companies to the fire. Quincy Engine Co. No. 4 ran a deluge gun in front of the burning stores. Firemen using some dozen 2½" lines finally brought the blaze under control in about one hour. Damage was set at $50,000.

Film Teaches False Alarm Evils

One of the busiest extra-curricular activities of the average fire department is the role it must play in the dissemination of information to local organizations. These groups are primarily schools and churches, and secondarily, service clubs, women's organizations and fraternal groups. But the children in the parochial and public schools are the individuals whose minds are most susceptible to the ideas on fire prevention.

Nevertheless, talking to children about fire prevention and the role that the fireman plays in the local community can be a boring thing indeed, both to the squirming children and to the department's representative who does the job month after month.

The Torrance, Cal., Fire Department, J. J. Benner, Chief, recently played a starring role in a motion picture which is intended to give to fire chiefs everywhere a needed tool to add to his talks before school pupils.

This film, "Punch and Trudy" is one of a series meant for television release but now made available to all cities and their respective fire departments.

The productions portray the activities of sixteen-year-old Punch and his six-year-old sister, Trudy. Punch is the normal likeable boy, having the neighborhood gang to play with, but always being pestered by his younger sister. In each of the stories, it is Trudy who comes to the rescue and gets Punch out of the difficulty involved.

The Torrance Fire Department was invited by Riviera Productions' producers of the series to act in this particular picture, and the firemen were more than happy to cooperate, realizing the value the film would have as a training aid.

The scenario concerns an average size town which is being plagued by false alarms, apparently being turned in by one individual. The film deals with the eventual capture by the children.

The picture opens with fire equipment responding down the city streets to a call, merely to arrive at the vicinity and find no fire. This occurs a second time in the film, and the narration explains how firemen are becoming concerned with this devious activity and how the police and citizens are on the lookout for the culprit.

The next day another false call is turtned in. This time the film shows a number of children gathered around the fire engines, at which time the chief gives them a talk on the dangers involved as far as false alarms are concerned. He explains how his men's time, the equipment and precious money are wasted whenever an alarm is turned in The chief goes on to tell them about what would happen if a fire really occurred in another section of the city and his equipment were also needed there. Much property could be destroyed, with possible personal injuries, even death.

The film implies that the chief did not think the children are responsible for this outbreak, but he does take this opportunity to give them an informal lecture on a problem which nearly every city faces at one time or another.

The story then finds Punch assembling his neighborhood group and telling them of a plan that he has which may catch the one responsible. This is not the place to tell how the offender is trapped, but he is. And it is little Trudy who does most of the work.

All in all, the film teaches cooperation between public officials and children. It is something that fire fighters can take into a school and show. It is believed that this entertainment type of production, which delivers an underlying lesson, will do much to create a lasting impression on students. And the ages of the main actors in the story, six to sixteen, makes the film adaptable for kindergarten and high school groups.

Incidentally, Riviera Productions conducted an extensive audience-testing program for the film, to see if it would be universally accepted. The film was shown before school children of all ages, with the resulting reaction exactly as anticipated. Then as a further experiment, it was projected before adult groups, to see if it had a mature appeal. Interest there was almost as great as it was before the youngsters, with the gist of the comments being, . . . "I want my kids to see that."

The picture is in 16mm, runs for twelve minutes and is complete with music, sound effects and narration.

Battalion Chief Walker of the Torrance, Cal., Fire Department explaining to children the dangers involved in false alarms—scene from production "Punch and Trudy."

Tape Recorders Used by New Haven Department

Today's fireman, assigned to Fire Alarm Telegraph as an operator, deals daily with emergencies in many forms other than actual fires. In order to achieve and maintain a high state of efficiency within the New Haven, Conn., Fire Department Control Center, special equipment is continually being added to assist the operators in their job of dispatching proper apparatus to the correct location with the least possible delay.

Included in such equipment at New Haven is a magnetic tape recorder, a small compact unit approximately two feet square, light enough to be moved without difficulty. Tubes, relays and power circuits are enclosed for protection. A seven-inch reel of magnetic recording tape, attached to a take-up reel, gives service for several days before a new supply is needed. Previously recorded conversations are reviewed by the Chief Operator and anything of importance is cut out and filed away for future reference. The tape is then spliced, erased and made ready for new recordings.

The recorder is attached to the department switchboard by means of a relay connection to trunk jacks on telephone lines designated for emergency use only. No warming up period is necessary; recording is instantaneous once the switchboard cord is inserted in the emergency trunk line.

The recorder's importance has definitely been established in the several years it has been used by the New Haven Fire Department. The possibility of damage suits against the city and unjust criticism of the fire department can effectively be overcome, whatever the issue, by simply turning a switch on the recorder and listening to the information given to the Fire Department Operator.

For example, a recent fire did considerable damage to a house. A replay of the recording tape, during investigation of a complaint that the apparatus was too long in arriving, revealed a woman visiting a friend had discovered the fire and telephoned for help, giving the fire department operator her own address several miles away. Without the recorder it would have been impossible to convince this person that she had incorrectly reported the fire location.

In another instance, a man telephoned late one night and reported an incinerator fire when actually his home was involved. A single engine company was dispatched, instead of the mandatory box alarm assignment. This man insisted he reported a house fire until confronted by his own voice on the recorder.

The average person faced with an emergency is usually gripped by fear or excitement. Naturally, the ability to think clearly is handicapped by this highly emotional state. The Operator's decision as to what type of fire or rescue equipment goes where, is based solely on the information given him by this type of person. The above illustrated examples clearly point out the important part the magnetic tape recorder plays in the New Haven Fire Department.

A new appliance added to New Haven Fire Alarm Bureau: foreground left, tape recorder for all fire alarms received over the telephone lines; rear: automatic fire detector alarm panel; over 100 buildings are protected, wired direct to operator's room.

Chief Operator Thomas F. Parks is shown here inspecting the department's tape recorder. The equipment is used to record automatically all calls received on the "emergency fire call" telephone number. The reels of tape are saved one month, then reused, hundreds of times.

N. Y. Studies Laws Affecting Volunteers

The Temporary New York State Commission on Fire Laws held its first meeting at the State Capitol in Albany, September 9. The Commission was created by the 1953 Legislature to study laws relating to volunteer firemen and fire prevention and protection services in towns, villages and fire districts.

The Commission, of which Senator S. Wentworth Horton is Chairman, elected Assemblyman Charles A. Cusick of Cayuga County as Vice-chairman and Assemblyman D-Cady Herrick II, Democrat, of Albany County, as Secretary.

The Commisssion appointed Charles W. Potter of Albany as Counsel and Miss Constance K. Eberhardt of Ithaca and Miss Zelda M. Uthe of Albany as Legal Consultants. All three attorneys are experienced in the field of legislative research.

The Commissison determined that its first effort should be the study of the laws relating to benefits payable when volunteer firemen are killed or injured in line of duty, and the financing of the payment of such benefits. The legal staff was directed to conduct research on the problem. Due to the variety of methods of furnishing fire protection service outside cities and the larger villages, the subject is quite complex. In many areas, confusion as to the legal provisions has hindered the full development of mutual aid plans among neighboring fire departments. Many other problems dealing with the organization and administration of the fire service will be considered by the Commission.

Chairman Horton said "Our laws relating to volunteer firemen and fire prevention and protection have needed a good overhauling for a long time. This Commission, representing various groups and interests, will be able to accomplish much more than various state agencies and firemanic groups could do by separate action."

Members present were Senators S. Wentworth Horton, Chairman, of Greenport, Long Island, and John G. Macdonald of Staten Island; Assemblyman Charles A. Cusick of Weedsport, Jacob E. Hollinger of Middleport and

D-Cady Herrick II of Albany; State Comptroller J. Raymond McGovern; Mary H. Donlon, Chairman of the Workmen's Compensation Board; Alfred J. Bohlinger, Superintendent of Insurance; Thomas J. Ryan, Director of the Division of Safety of the Executive Department; J. Willis Barrett of Williamson; Albert J. Foley of Dunkirk; Stephen P. Fox of New Hyde Park; Charles Mangan of Great Neck; William A. Reid of Hamilton; Morgan Strong of Schenectady, and Edward F. N. Uthe of Coeymans. Senator William Rosenblatt of Brooklyn, also a member of the Commission, was not able to be present.

State officials attending at the invitation of the Commission were Deputy State Comptroller William J. Embler; J. Palmer Harcourt, Deputy Director of the Division of Safety; B. Richter Townsend, Chief of the Bureau of Fire of the Division of Safety, and William Evans, Assistant Counsel of the Workmen's Compensation Board.

Rochester Department Gets Major Improvements

Sweeping changes in Rochester's entire fire station setup are announced by City Council's Public Safety Committee. Under the plan, which in the form adopted covers seven years, 17 of the city's present 28 fire stations will be abandoned; nine will be remodeled and two will be rebuilt. Eleven new fire stations will be constructed to house companies now located in buildings slated for abandonment.

The over-all program will cost $1,750,000, according to Public Safety Commissioner Kenneth C. Townson. Although the number of fire stations will be reduced from 28 to 22, the number of fire companies will not be cut, Townson emphasized. The present makeup of the Fire Bureau is 25 engine and ladder companies; the only changes in companies will be that Engine 6, at 785 University Ave., will be eliminated and a new ladder company, No. 11, will be created, this to be housed with Engine 12 in the city's newest station on Wisconsin St.

The 1954 part of the program, as recommended, calls for building of a new station near Broad and Oak Sts. to house Engines 3 and 4, and Ladder 10. It will also provide quarters for Battalion 2 and room for a reserve pumper and squad. One other house is scheduled for this year—on Chestnut St.

The Fire Bureau recently received 11 new vehicles, the largest number in one year since the horses were let out to pasture in 1926. These include six pumpers, two built in the Bureau's shops under Deputy Chief Louis Vogt, three new aerial ladders and two rescue squad trucks. All units will be in operation in September. State and Federal aid was invoked in the purchase of certain of the new apparatus.

Rochester purchased little fire equipment during the 1930's and early 1940's. As a result it had to begin an intensive rebuilding program. Since 1949 the city has purchased or built 20 new pumpers out of its total of 25. The 1926 pumpers have been placed in reserve, to correct a weakness in the department emphasized by three multiple-alarm fires, in addition to th costly Kodak fire which

(*Continued on page* 938)

PEABODY THREATENED BY FIRE RESULTING FROM CHEMICAL BLAST

Mutual Aid Functions to Confine Near-Conflagration Caused by Explosion of Chemicals

A Special Report

***Editor's Note*: This is the case history of another fire that is the product of this chemical era. It provides convincing evidence of the hazards inherent with modern chemical processing, especially where such operations are carried out in populated areas.**

The editors acknowledge with thanks the several reports on this fire contributed by our readers. Particular appreciation is extended to Messrs. J. E. Kelley Jr., and L. E. Martin of the Town of Danvers, for basic data and photographs incorporated in this Report.

TAKE a built-up metropolitan area, crowded with combustible buildings and multiple occupancies; add one manufacturing plant engaged in the processing of chemicals and resins, including vinyl acetate and acetone, and you have a situation that spells hazard to the community, and danger to the fire service, as well as to the plant workers.

Such a recipe for trouble was "cooking" in the busy community of Peabody, Mass., on April 30, last, when the pot boiled over, perhaps literally as well as figuratively. The result was an explosion and fire which brought death to one person, serious injuries to 23 others and property loss amounting to $500,000.

The center of the emergency was the plant of the American Polymer Corp., a subsidiary of the American Resinous Corp., the parent organization, which latter factory, incidentally, was separated from its subsidiary by a 20-foot wide alley, used by both for shipping, receiving, etc.

The plant is located on Foster st., Peabody, in the heart of the leather and leather finishing district, a quarter of a mile from busy Peabody Square. The main building was of cement construction, two-stories in height, 160 x 40 ft. The main floor and part of the second were given over to processing of chemicals and resins. The office also occupied space on the second floor.

Shortly after 1:00 P.M., an explosion occurred in the plant, which was described by casualties and survivors as resembling that of a small A-bomb. The blast was felt over a wide area. It broke windows and opened doors over half a mile away. The doors on fire headquarters building over a quarter of a mile distant, were literally blown open by the force of the explosion. Fire quickly followed to involve the plant.

According to company officials and workers on the job, the trouble centered in a 600-gal. acorn-shaped tank containing acetone and vinyl acetate, which was being distilled under pressure. The explosion was preceeded by a loud hissing noise and most employes nearby used this as a warning to make a break

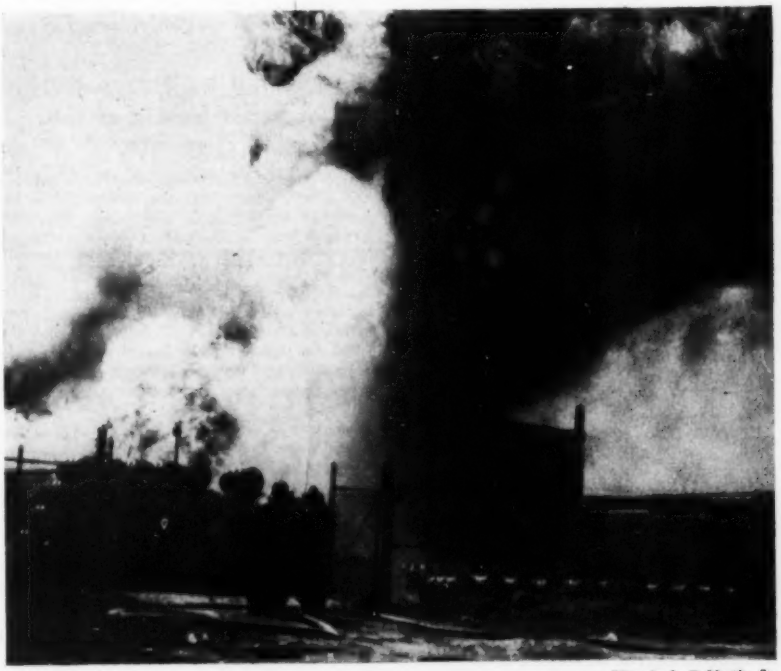


Photo by L. E. Martin, Jr.

Secondary explosion at fire involving plant of American Polymer Corp., Peabody, Mass.

Firemen wet down smouldering ruins of chemical plant at Peabody, Mass., after explosion ripped through the building. One person was killed and 24 were injured, seven critically.

for the exits. Other attempted to shut down the kettle.

George Lawson, 43, supervising operations on the second floor, was one of those who attempted to avert trouble by shutting off the kettle. He never made it and was caught in the blast and severely injured, later dying at J. B. Thomas Peabody Hospital. Practically every other person remaining in the room at the time of the explosion was severely injured and hospitalized. Edward Donovan, traffic manager of a nearby transportation company in the building (second floor) on business, was buried in the ruins by the blast, and found by firemen after being spotted by a photographer from an adjacent building. He remained in the wreckage over an hour-and-a-half while firemen and volunteers worked feverishly to extricate him. It was later reported that he would live.

The fire department was made aware of the blast when the main station's doors flew open. Simultaneously, telephone alarms and Box 26 were received. The box was pulled by an off-duty fireman who happened to be passing the scene at the moment of the explosion.

Second and third alarms were shot in by Deputy Fire Chief Joseph Mulcahy and Chief of Department Arthur C. Flynn. The latter also ordered all available help from Danvers, Salem and Beverley, Mass., under the mutual aid program in effect in the area. Chief Mulcahy was passing near the site when the blast occurred. This was severe enough nearly to cause him to lose control of his car. It was also sufficient to impel him to check quickly and bang in the second alarm.

Fire fighters, aware of the hazard posed by the blast and fire, quickly got heavy streams into action to prevent the fire from involving the main plant across the alley and other structures as well as storages of chemicals. Meanwhile firemen and police, aided by citizens and plant workers who had not been injured, conducted search of the ruins as rapidly as fire streams cooled them down in the hunt for casualties. As rapidly as the injured were located they were sped to hospitals by local and out-of-town ambulances. Seven of those injured were listed as critical.

About 2:00 P.M., a secondary explosion threatened fire fighters and further energized the flames. Firemen however refused to yield an inch and in about an hour were able to report the fire controlled. Search of the ruins for victims, and for lurking fire, was carried on for another four hours.

Small fires started by embers and sparks were all extinguished and all major exposures were successfully covered. Extra police held back the crowd of curious and attempted to hold the traffic lanes open for ambulances and fire rigs.

Tar-Layered Roof Called Cause of Rapid Spread of GM Plant Fire

An investigation has disclosed that a tar-layered roof was the major cause for the rapid spread of the blaze that destroyed the General Motors transmission plant in Livonia on August 13, according to Livonia, Mich., Fire Chief Calvin L. Roberts.

"The layers of tar were built up over a thin metal plate," Roberts explained. "When this plate was subjected to intense heat, it caused the tar to melt and drip throughout the building, spreading the fire as it dripped. Highly combustible gases given off by the tar also fed the flames and accelerated the spread of the fire. From the exterior of the building, the fire appeared to be spreading along the roof section at a much faster pace than at floor level. Firemen could not enter the burning plant because the central portion of the roof collapsed first, pulling the outside walls into the building."

Roberts said the investigation of the fire was conducted jointly by Livonia and state officials, all of whom concurred in the report that was made.

Investigators included Roberts; James L. Hagen, Livonia director of public safety; Lieut. William Newstead of the Livonia police department, and Sgt. Oramel O'Farrell and Detective Glenn Tanner of the state fire marshal's office.

Hagen said the investigation showed "tar to be a more combustible material than most people supposed. It is now clear that tar roofs, wherever they are used, constitute a continuing and dangerous fire hazard.

"I strongly recommend that vigilant prevention measures be undertaken to guard against the possibility of fire from this cause," Hagen said. He also recommended that the use of tar roofing material should be discontinued in all new construction until some means can be found to lessen its combustibility.

Hagen and Roberts said the investigating team reached the following conclusions:

1. The fire started in almost the exact center of the manufacturing building in a drip pan directly under a 120-foot conveyor which carried torus covers through a rust-proofing dip tank.

2. The most probable cause of the fire was a spark dropped into the drip pan from a pipe-cutting operation conducted from above with an acetylene torch.

Chief Calvin L. Roberts

3. The fire might also have been caused by an electric spark or a short from the electrical system.

4. Livonia water pressure was more than adequate. Up to 5 p.m. on the day the fire broke out, the pressure on city mains stood at a normal 45 pounds. After 5 p.m., pressure increased to 62 pounds and remained at that level throughout the night.

Rochester

(*Continued from page 937*)

tied up the bulk of the city's equipment for more than two days.

One of the weaknesses of the Bureau, according to Commissioner Townson, was the lack of reserve aerial ladders, until this year. With the purchase of three metal ladders, the Bureau will have three ladders, to go into reserve. The reserve units have wooden ladders which, according to the Commissioner, cannot be raised with hose attached to the fly for fires in upper stories of buildings.

For Practical Discussion of Current Fire Department and Fire Management Problems

PROTECTING UNDERGROUND FUEL OIL TANKS

THIS Round Table discussion deals with safeguards provided where fuel oil tanks of large capacity are installed underground in high value congested districts.

Most fire departments reporting require the tanks to be tested with air pressure periodically, and also require that the tops of tanks be below the level of any piping to which they may be connected. Where tanks are placed underground with less coverage than that specified, they are usually required to have a reinforced concrete covering of at least five inches thickness, said covering to extend well beyond the outline of the tank in all directions.

Vent and filling pipes are required by practically all cities reporting.

A large percentage of cities follow the requirements of the National Board of Fire Underwriters pertaining to underground fuel oil storage.

Readers are invited to participate in this discussion or on next month's discussion which is described in a box on a subsequent page. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

John W. Hall, Chief, Hagerstown, Md.: The Fire Prevention Ordinance limits underground storage, depending upon adjacent buildings, basement or pits in basements. Tanks must be air tested using not less than five pounds of air, after they have been placed in the ground. The tops of tanks must not be less than two feet under the surface of the ground and below the level of any piping to which the tanks may be connected. In lieu of the two-foot covering, tanks may be buried under one foot of earth and a cover of reinforced concrete, not less than five inches thick, concrete to extend at least one foot beyond the outline of the tank in all directions.

Permits are granted by the Fire Chief and the Plumbing Inspector.

Special fire protection facilities may consist of automatic sprinklers, standpipe and hose, fixed, wheeled or portable extinguishers or an automatic alarm or any combination of these facilities.

The Fire Chief has the power to order installation of fire appliances suitable for the probable causes of fire.

Frank L. Veasley, Chief, Cleveland Heights, Ohio: As Cleveland Heights is not an industrial city, we do not have problems involving large capacity storage tanks. Most of our installations are therefore confined to home heating, with two or three instances where the tank capacity does not exceed two thousand gallons, and one where we have a large commercial using oil from a ten thousand gallon tank. However, we follow our own city ordinance on these installations along with the rules and regulations issued by the Division of State Fire Marshal. We do enforce to the letter the necessary clearances to property lines and adjoining basement foundations, and the stipulated covering required in each case.

The Building Department issues all permits for such installations.

Whatever protection is specified and recommended by the Fire Prevention Bureau and by the authority of our local fire ordinance must be provided.

The Chief has the same power invested in him as our fire inspectors. This is also by the authority of our Fire Ordinance, and the State Fire Marshal Act. As all flammable liquid storage is only allowed by special permit, such permit can be revoked if necessary.

J. C. Sievert, Chief, Tucson, Ariz.: We are governed by the National Board of Fire Underwriters' Standards and the Pacific Coast Building Officials' Uniform Building Code.

The Fire Department issues permits before the Building Inspection Department will issue a license.

By the City Ordinance, the Chief or his representative has authority to require any safeguards and/or fire protective equipment necessary. Also, by City Ordinance, he has authority to have any dangerous situations corrected or removed.

Zephrin F. Drouin, Chief, Lewiston, Maine: The Zoning Board restricts the installation of large capacity fuel oil tanks underground, except on approval of the Bureau of Fire Prevention of both the State and the City of Lewiston. And such installations must conform with the requirements and standards of the National Board of Fire Underwriters before permit is issued.

Applications are made to both the State and City Fire Prevention Bureau. The site is inspected for each installation and if same meets with the approval of the City's Fire Prevention Bureau a permit is issued by the Building Inspector.

Automatic safety valves are required to shut off valves at the tanks and at the burner, in accordance with the National Board Standards and should the situation require additional safety precautions, the Chief of the Bureau or the Chief Engineer may make and prescribe other controls for safety.

Through the powers of the Fire Prevention Code Ordinance, the Chief Engineer is empowered to make additional requirements to control such hazards.

A. W. Lang, Jr., Chief, Enid, Okla.: Underground tanks are installed in accordance with the specifications set up by the National Fire Protection Association.

The City Engineer grants the licenses and permits.

Special protection is required in accordance with the surrounding properties and the location of the installations.

Without the signature of the Chief on the permit, there can be no license issued. An inspection is made on all installations before a license is issued.

Other than our building codes, we must sell the owner on fire protection and prevention. Our laws seem to lack the teeth in them that they should have. We need legislation to give the Fire Chief or the Fire Prevention Bureau more legal authority to correct some of the hazardous situations that exist from installations made prior to our adoption of the N.F.P.A. Codes.

G. Napoleon Guevin, Chief, Manchester, N. H.: All installations are in accordance with regulations established by the National Board of Fire Underwriters.

The Chief of Department grants licenses, permits, for such installations.

The Chief also has the right to establish regulations whenever he deems it necessary.

John C. Long, Chief, Danville, Va.: The Danville Fire Department use the same regulations on large fuel oil tanks that they do on gasoline. The tanks are required to be at least three feet under ground.

All tanks of 1000 gallons or more must be approved by the City Council before the permit is issued by the Building Inspector.

They all are required to have carbon dioxide or dry powder extinguishers

The Fire Chief has to first approve all permits before they are issued or approved by the City Council. He

(*Continued on page 967*)

HERE IS THE QUESTION

1. **What safeguards are required where fuel oil tanks of large capacity are installed underground in high value congested districts?**
2. **Who grants licenses, or permits, for such installations?**
3. **Are special fire protection facilities required in buildings served by such installations? If so, what fire protection facilities?**
4. **What powers, if any, has the Chief of Fire Department with regard to controlling hazards created by such installations?**

News of the Manufacturers

Federal Elects Scott President

William W. Scott was elected president of Federal Enterprises, Inc., Chicago, maker of electrical advertising displays, fluorescent lighting, and signaling devices, Sydney K. Schiff, chairman, announced recently. Mr. Scott, who has been executive president, succeeds the late Linwood A. Miller.

William W. Scott

Novel Fire Fighting Unit by McCulloch

A unique fire fighting unit is the trailer designed to house the portable high-capacity fire-fighting pump manufactured by McCulloch Motors Corporation, Los Angeles. The trailer, compact and comparatively light in weight, is expected to be of particular service to small rural communities.

Constructed entirely of welded steel, the unit was built to specification for McCullock by Henry Clark of Sterling Trailer, El Monte, California. Painted bright red and trimmed with chrome, the trailer has a loading platform on top and a running board for riders.

Mounted on a 2000-lb. axle, the trailer has standard Ford or Plymouth wheels with 6-ply tires, is 78 inches in length, 65 inches in height and weighs 1200 lb. A 150-gallon steel tank has been installed over the axle, permitting enough additional space for 2 McCulloch 7-FP Fire Pumps, dry chemicals, and two 25-ft. lengths of suction hose.

McCulloch's new portable fire pump, the 7-FP, weighs 57 lbs. complete and is designed for easy portability and high performance. The self-priming centrifugal pump is powered by a McCulloch 7-hp, 2-cycle engine, has an automatic rewind cable starter, and a non-clogging type impeller mounted on the engine shaft.

New, Portable, Battery-Operated Tape Recorder

The "Cub Recorder," a new completely portable tape recorder equipped for recording, playback, erase, monitoring and battery recharging, housed in a compact briefcase type container, has been introduced by Ectro, Inc. of Delaware, Ohio.

The unit, which weighs less than 13 pounds, has shoulder strap for easy carrying and is designed to record two full hours, or approximately 20,000 words.

Its light weight and convenience reportedly lends this recorder to a wide variety of on-the-spot uses, where "plug-in" current is not readily available among them fire inspection and prevention, firemanship training, recording meetings, operations on the fire ground, and in routine fire department administration. It is also an asset in arson investigation and evaluating of personal property.

The push-button microphone starts and stops the unit for recording and play back. One-hand operation allows operator freedom of movement. When one track is recorded on the tape the reels are easily reversed and another hour of recording can be made. The tri-purpose head magnetically erases the tape as a new recording is made; the tape can thus be used over and over again.

The Cub Recorder is powered by a 4-volt, non-spill storage battery with normal life span of 450 hours. Battery can be recharged from an automobile cigarette lighter outlet or from the Cub Corder accessory charger, utilizing 115-230 volt current.

The device can be used with a variety of accessories, such as a conference microphone for group use; a lapel 'mike'; used as a telephone pick-up to record two-sided conversations.

M.S.A. Equips Air Masks With Speaking Diaphragms

Demand-type oxygen and air masks and apparatus supplied by Mine Safety Appliances Company, Pittsburgh, henceforth will include speaking diaphragms as standard equipment, the manufacturer announces. The speaking diaphragm permits voice transmission to other workers, MSA engineers explain.

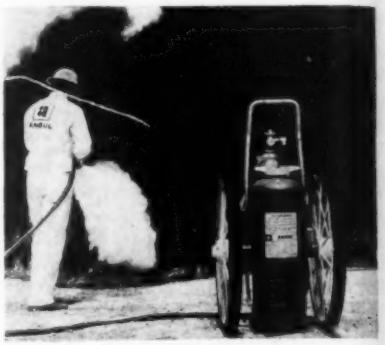
For some time the speaking diaphragm facepiece has been standard on MSA's "Chemox" apparatus.

MSA engineers point out that voice communication by means of speaking diaphragms has steadily gained popularity among mask users because it promotes efficiency, worker morale and eliminates errors and hazards that may result from "lack of liaison."

Sound-powered telephone equipment also may be used with the speaking diaphragms, to permit communication over longer distances.

Ansul Introduces New Equipment

New nozzle and gas tube design and stepped-up rate of flow have increased the fire fighting effectiveness of Ansul wheeled extinguishers by 50 per cent, Ansul Chemical Company, of Marinette, Wis., reports.



New model Ansul dry chemical wheeled extinguisher goes into action against a gasoline spill fire. Effectiveness of the extinguisher is said to be increased by 50 per cent.

The 150-B and 350-B replace the company's A-models. Using dry chemical as extinguishing agent, Ansul wheeled fire extinguishers are now protecting hazards in the steel, chemical, petroleum, aviation, railroad, automotive and other industries.

Incorporated in the special nozzle design is a new sealing principle (floating plug seated against a rubber pad) to insure water and gastightness.

Dry chemical flow rate has been increased 30 per cent by redesigning the gas tube in the dry chemical chamber, permitting efficient use of larger nozzle orifices. Range of the dry chemical stream is 40 feet.

Operation and maintenance have been simplified by the addition of a check valve in the gas tube and a pressure gage in the nitrogen cylinder valve. Due to increased regulator capacity, operating pressure on the 350-B extinguisher can be reached in 12 seconds.

Overall dimensions for the 150-B are 55¾ inches high and 30 inches wide. Weight is 525 lbs. The 350-B is 60 inches high and 35 inches wide. It weighs 1080 lbs.

Rubber tires are optional on the 150-B.

(*Continued on page* 963)

Left: McCulloch fire fighting unit being towed by station wagon. Right: Fire fighting unit showing pump compartment.

Pick out the equipment shown here

...that has served Willimantic 25 years!

Is it the rope? The truck itself? The helmets? No.

It's the Eureka Multex Multiple Woven Hose. Proof? Willimantic, Connecticut, uses a card system giving the complete history of every length of hose in the department. These files reveal that some of the Eureka Fire Hose still in service was bought 'way back in 1927!

If the Eureka Hose made twenty-five years ago can chalk up such a performance, think what today's Eureka Hose, with all of Eureka's latest improvements, can do! Better yet, find out by specifying Eureka on your next order!

FOR GREATER PROTECTION TO LIFE AND PROPERTY

Hundreds of fire chiefs, like Chief Rivard of Willimantic, know the dependability of Eureka Fire Hose—dependability that results from features such as these:

- ★ **The unique Smooth-Interior Filler Ply for maximum nozzle pressure.**
- ★ **Balanced Weave and Controlled Curing, which eliminate excessive writhing and warping.**
- ★ **Formula "X" for positive protection against mildew.**
- ★ **"Bomb-Tested" Linings to insure long, dependable life.**

EUREKA

EUREKA FIRE HOSE

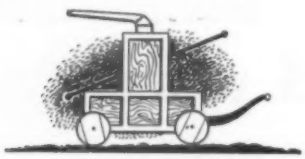
Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

195 Hudson Street • New York 13, N. Y.

Division of United States Rubber Company

THE *Chief* SAYS

A man learns something new all the time in this business. I picked up a copy of the Spanish-language edition of LIFE magazine at the library the other day by mistake, and thumbed through it out of curiosity. It contained an article about fire fighting in Chile; and I managed to read enough with my "cigar-box" Spanish to learn a startling fact. In Santiago, the capital of Chile, 650,000 souls rely on *volunteer* units for their fire protection. As you might suspect, these "bomberos" are held in high esteem by the citizens. If you'll pardon the pun, they stand "at the top of the ladder" of business and social prestige in Chile. One other thing I got from the article—a feeling of even greater appreciation for the modern, efficient equipment we flame-eaters work with here in the States. Like that new BOARDMAN Pumper we added last month . . . a real honey, on a standard commercial chassis for top economy and fast service when repairs are needed. So far as I'm concerned, there's not a better pumper made anywhere in capacities up to 750 GPM than that Waterous-equipped BOARDMAN-Built Pumper.



A couple-hundred years back, our own volunteer fire fighters became considerably more efficient when the first American fire pump was put into action. Firemen could work from a somewhat cooler distance, and direct the water with some force. Of course, it took five men just to operate the pump, and an entire bucket brigade to keep the pump storage area filled. I'm just glad I live in a more modern time, when the new electric-primed BOARDMAN Pumper is our standard of excellence. About the only thing it has in common with that 18th century contraption is the fact that it *can* be filled with buckets in an emergency. That's made possible by the big rear easy-fill opening—a feature that can pay off even in this day and age, if the fire happens to be located in the wrong place. And now that I mention it, I've seen lots of fires in my time that could have picked a much more convenient place to happen!

THE BOARDMAN CO.

P. O. Box 1152

Oklahoma City, Okla.

Convention Dates

Oct. 19-21—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Seventy-first annual meeting, Omaha, Neb. For information, write Russell D. Salak, Secretary-Treasurer, P. O. Box 312, Schuyler, Neb.

Oct. 20-23—KANSAS STATE FIRE SCHOOL. Anual meeting, University of Kansas, Hutchinson, Kans. Director, Gerald Pearson, Director Extension Classes, 111 Fraser Hall, University of Kansas, Lawrence, Kans.

Oct. 30-31—INTERNATIONAL RESCUE AND FIRST AID ASSOCIATION. Annual meeting, Greensboro, N. C. President, Don Luther Gold, Crest Safety Equipment Co., Dunellen, N. J.

November 21 — KEYSTONE STATE FIRE CHIEFS ASSOCIATION. Fall meeting, Marcus Hook, Pa. The conference will feature a trip through the Sun Oil Co. refinery. Secretary, Lew Atkinson, Malvern, Pa.

Dec. 5-6—ILLINOIS FIRE CHIEFS ASSOCIATION. Annual meeting, Hotel Wolford, Danville, Ill. Secretary, Arthur Holtz, 822 Hillgrove avenue, Western Springs, Ill.

Connecticut Firemen Elect

Thomas Martin, of the New London, Conn., Fire Department, was elected president of the Connecticut State Firemen's Association at the annual convention of the association in Plainville on Aug. 21. He succeeds Edward Turber of New Britain.

Other officers named were Joseph Farr, New Britain, vice-president; John Moehring, Stamford, secretary, and Charles H. Brundage, New Haven, treasurer. The Rev. Michael J. Thompson, of Niantic, was renamed chaplain.

County vice-presidents elected were New London county, Leonard Visconvi, New London; Fairfield county, Benjamin Mangels, Rowayton; Hartford county, Everett Souney, New Britain; Litchfield county, William J. Canty, Burrville; Windham county, Irving Barber, Moosup; New Haven county, John M. Smith, Milford; Tolland county, Richard Davis, Columbia, and Middlesex county, J. Franklin Dunn, Middletown.

Stafford Fire Department No. 1, of Staffordsville, won the annual convention contest sponsored by the Hartford County Mutual Fire Insurance Company for volunteer fire departments. The contest is based on efficiency in a number of factors pertinent to the operation of a volunteer company.

The convention ended on Saturday, Aug. 22, with a four-hour street parade through the business district of Plainville.

TOM MAGNER

Wisconsin Chiefs Hold Conference

The Wisconsin State Fire Chiefs' Association completed a successful conference in Green Bay, Wis., on July 20, 21 and 22.

The new officers elected are: Chas. J. Morris, Sharon, president; Wm. J. Gleason, Green Bay, first vice-president; Geo. K. Johnson, Mequon, second vice-president; Douglas J. Dunlop, Wauwatosa, secretary-treasurer; Chris M. Bertelsen, Shorewood Hills, Sergeant-at-Arms, and E. A. Greunke, Appleton, past-president. Trustees are: Edward J. Page, Madison; Claire Knoll, Beaver Dam, and Olaf Sorenson, Superior.

The next conference will be held in Beloit, Chief Glen Davis host.

"X" MARKS THE SPOT IN DETROIT

Chief Edward Blohm of the Detroit Fire Department says: ***"Yes, we've 'X-ed' out old-fashioned towers for keeps*** in our construction program; since trying out Circul-Air Dryers 7 years ago we've adopted them for all new buildings. They've saved hose, saved thousands of dollars in construction costs and . . . the ***men like them. We're buying 10 of them for our new apparatus repair building for less than the cost of one tower."***

Accepted Approved Recommended

No other drying method is so fast —so economical—so easy to use. If *you* haven't enjoyed the benefits of Circul-Air, we suggest you investigate its merits now.

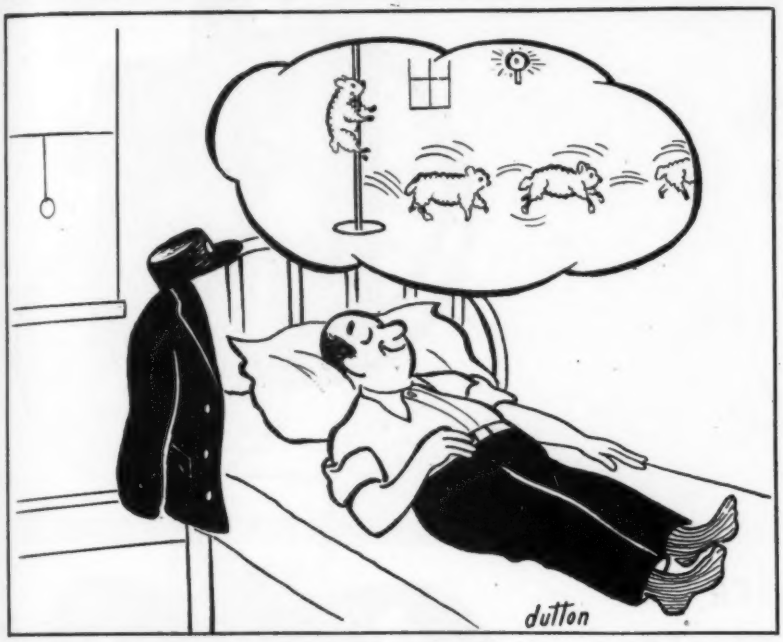
If you're building write for free copy "Fire Station Design" volume #4

Just off the press.

THE CIRCUL-AIR CORPORATION

575 East Milwaukee . . . . Detroit 2, Mich.

FALSE ALARMS



People are coddled too much. For example the bartender won't let you pour your own drink.

Waitress (Looking at nickel tip left by Scotchman): "Whatcha trying to do Laddie, seduce me?"

Sign on bra display: These come in four sizes—Small, Medium, Wow!, and Holy Mackerel!

When a reporter on a mid-western daily was sent out to round up opinion of the man on the street concerning the modern woman, the first person he queried on the subject was a man who had just passed his 101st birthday.

"I'm afraid I can't be much help to you," replied the centenarian regretfully. "I quit thinking about women almost two years ago."

He toils not, neither does he spin.

"What do you mean?"

"He lost his job and they repossessed his car."

A friend of ours was buttonholed the other night by a wavering gentleman, exuding the delicate fragrance of cheap bourbon, who demanded, "Hey, where'sh Alcoholics Anonymoush?"

"You want to join?" asked our friend incredulously.

"Heck, no," roared the inebriate. "I want to resign."

The noon whistle blew and the worker, limping badly, left his job.

"What's wrong with you?" asked the foreman.

"Got a nail in my shoe," he answered.

"Why don't you take it out then?"

"What! During my lunch hour?"

Distance Lends Enchantment

It was a tough, close-fought game between two bitter intercollegiate football rivals. The pressure got a little too much, a foul was made and the referee penalized the offending team ten yards. The captain bawled out the arbiter with a blistering tirade, finishing off with this rather succinct observation, "I think you stink."

The referee promptly added fifteen yards more to the penalty and called to the captain, "See how I smell from there."

Just because someone says a man "is honest as the day is long" doesn't mean he may not get in a little dirty work at night.

A man took his grandchildren to the zoo. On the way home, he asked which animal they liked best.

"Grandpa," one of them said, "I think that big hippoprotestant was the nicest of all."

Off the Hook

A telephone service girl received a call from an elderly lady: "My telephone cord," she said, "is too long. Would you please pull it back at your end?"

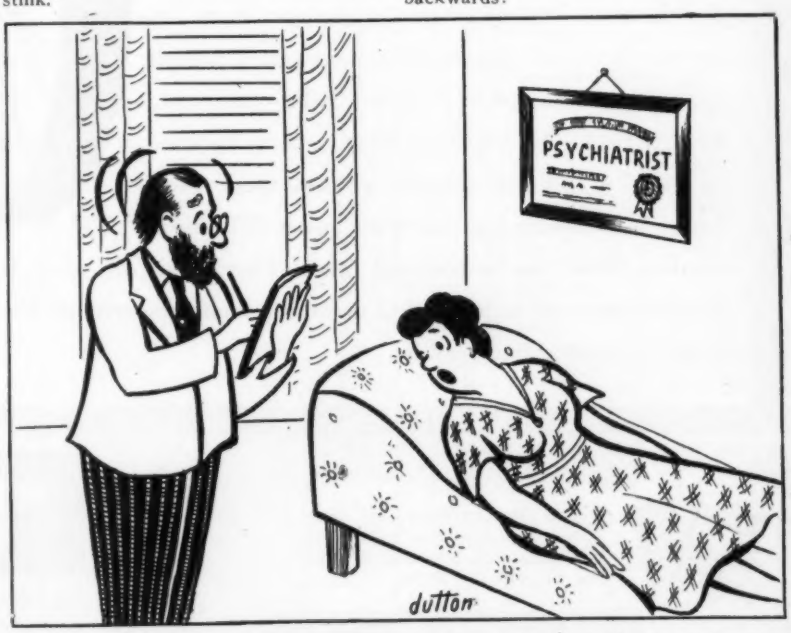
After all is said and done, there is more said than done.

People are like steamboats—they toot loudest when they are in a fog.

Definition of Popular Government: The first few weeks of a new administration.

At a political convention, a sign had been erected near the speaker's platform for the benefit of press photographers. It read: Do not photograph the speakers while they are addressing the audience. Shoot them as they approach the platform.

And then, some people are like blotters. They soak it all in, but get it all backwards!



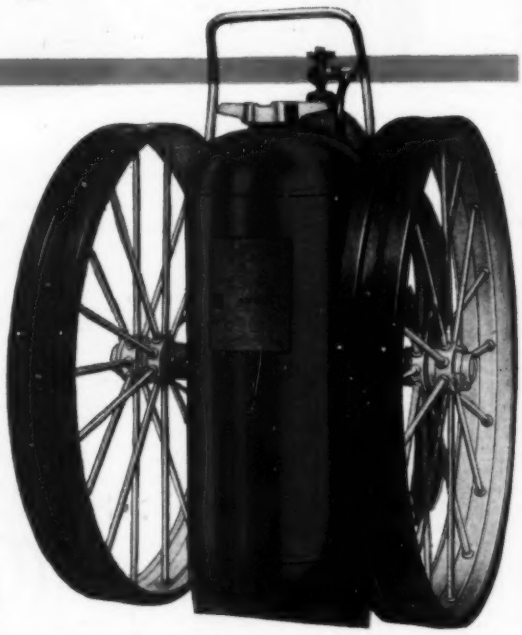
"I've always dreamed of a handsome fireman carrying me down a ladder, but I live in a basement apartment!"

NEW ANSUL WHEELED FIRE EXTINGUISHERS *provide*

MODEL 150-B

Rubber tires optional equipment

. . . GREATER FIRE-KILLING CAPACITY . . . HIGH-SPEED OPERATION and EASIER MANEUVERABILITY . . .



MODEL 350-B

Ansul "B" Model Wheeled Extinguishers are completely new. Dozens of design changes have improved their operating characteristics as well as their appearance. They provide faster, easier extinguishment of fires almost twice as large as those handled by our "A" model wheeled extinguishers. New Ansul Wheeled Extinguishers are easier to move to the fire. They can be actuated faster. They'll put out more fire faster. They're easier to recharge and maintain. And they will give even more years of trouble-free service.

For a demonstration call your Ansul representative today. Or for additional information send for file number *W-24*.

ANSUL *Chemical Company*

FIRE EQUIPMENT DIVISION • MARINETTE, WISCONSIN

MANUFACTURERS OF DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT, REFRIGERATION PRODUCTS, INDUSTRIAL AND FINE CHEMICALS AND LIQUEFIED GASES

NEW

ANSUL

WHEELED

FIRE

EXTINGUISHERS

provide

1. Easier, Faster Operation
2. Greater Fire-killing Power
3. Easier Maneuverabilty
4. Greater Dependability
5. Easier Maintenance
6. Greater Safety for the Operator
7. Better Appearance

ANSUL
Chemical Company
FIRE EQUIPMENT DIVISION • MARINETTE, WISCONSIN

OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES

New Designs and New Equipment to be Featured at Safety Show

The 41st NATIONAL SAFETY CONGRESS and EXPOSITION is scheduled for Chicago during the week of October 19 to 23. Exhibits, confined to the Conrad Hilton Hotel, will be a must for all delegates. Each year manufacturers of fire protection and safety equipment point for the week of the Safety Show to introduce new models and new safety devices. These exhibits provide an excellent opportunity for safety personnel to investigate the latest developments by manufacturers of safety equipment.

New Wheeled Extinguishers

Featured in Ansul Chemical Company's exhibit will be the new "B" Model Ansul Wheeled Extinguishers. Fire-fighting effectiveness of the Models 150-B and 350-B is nearly double that of the "A" Models which till now have been considered tops in fire extinguishing capacity. In Ansul's new wheeled units operation has been simplified, maintenance is easier and certain safety features have been incorporated into these new models. The appearance has been improved as a result of styling by Raymond Loewy. And the new baked enamel finish assures greater durability of their sparkling appearance.

Preview of New 10-Pound Model

Although the Ansul 10 Extinguisher will not be in production until after the first of the year, delegates to the Safety Show will get a sneak preview of this new Ansul development. It, too, is styled by Raymond Loewy and combines an attractive appearance with the functional superiority associated with all Ansul Fire Extinguishing Equipment.

Demonstration of Nozzle Assembly

Of considerable interest to all fire protection personnel will be a demonstration of the quality control practiced in the assembly of an Ansul water-tight nozzle and in its subsequent pressure test. In a corner of the Ansul booth (Nos. 92-93) a special work table will be installed. Production supervisors from the Ansul plant will go through the operations of assembling a nozzle from previously inspected parts. After each nozzle has been assembled it will be subjected to a 200 lb. gas pressure test as is done at the factory.

Another feature of interest to delegates will be a series of photographs showing the various steps taken in the manufacture, filling and inspection of gas cartridges for Ansul Hand Extinguishers. Emphasis is placed on Ansul's rigid quality control in the manufacture and filling of this all-important part of a dry chemical hand extinguisher.

The display will also include actual models or photographs depicting Ansul's complete line of Dry Chemical and Met-L-X Dry Powder Fire Extinguishing Equipment.

CAIRNS

PERSONAL

EQUIPMENT

FOR

FIREMEN

Think of the many advantages of buying ALL your personal equipment, from head to foot, from one dependable source—from a firm able and ready to assume responsibility for the quality of EVERY item, and to stand back of it with a reputation gained in serving firemen for more than a hundred years. . . . Here is a partial list of the equipment we can supply, promptly. Many other items are described in our Catalog, sent on request.

TURNOUT SUITS
RUBBER COATS
RUBBER BOOTS
RUBBER-LINED MITTENS
ASBESTOS GLOVES
SAFETY BELTS
TRAFFIC OFFICERS' BELTS
CAPS
BADGES

HELMETS

LEATHER
ALUMINUM
FLINT-FLEX

REGULATION
and
OTHER STYLES

AND, FOR THE DEPARTMENT,
SECRETARY'S RECORD BOOKS
LOOSE-LEAF FIRE RECORD BOOKS
SECRETARY'S BLANK FORMS

Write for Catalog 341

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

SINCE 1836

Among the Buffs

By Paul C. Ditzel

Visiting fire buffs, as well as firemen, generally get the royal red carpet treatment when they show up in strange cities and ask for a brief look-see at the fire department facilities. The tour is generally an exhaustive affair but seldom is there an opportunity for the visitor to see the home lads in operation.

But take Carl Fridley, Cleveland, O., buff. He got more than he bargained for when he stepped on Jack Robrecht's welcome mat at 5113 Willows Ave., Philadelphia 43, Pa., recently. Thirty hours and four multiple alarms later, Carl decided it was just too much for him and went packing back to Cleveland.

Here's how Brer Robrecht recites the visit:

"I took Carl around to various fire stations and was apologizing for the fact that we had so little activity. Me and my big mouth! Boom . . . We had a seven alarm fire at 9th and Jefferson Sts. in a five-story warehouse loaded with 4000 tons of crude rubber and 2000 tons of leather tanning solution. There was an explosion and the building collapsed into a heap of smoking, flaming rubble. While this fire was at its height, there was another two-alarm fire in a three-story building at 911-13 N. Broad St., housing the Globe Fabricating Products. The off-duty platoons were ordered back to their stations and all reserve firemen were called in!

"The Broad St. fire was knocked out in about two to three hours but the 9th and Jefferson job burned for more than 24 hours. The next morning as Carl and I were wearily preparing to hit the sack, there was another two-bagger in the 108th Field Artillery Armory at 2110-20 N. Broad St. We took that in. Came home and slept until 9 a.m.

"A few hours later, as we were entering Linton's Restaurant at 52nd and Baltimore, one of the chefs came out and yelled 'pull the box!' The firemen had a nasty job in the electrical switchboard at the restaurant.

"Later, the radio announced that Eng. 13, Truck 1 and Battalion 4 were going to Broad & Poplar Sts. Engine 13 hollered for a box. They pulled three alarms for a record and juke box establishment at 885 N. Broad St."

Some weeks later however, Carl took another trip. This time to Detroit to visit Buff John P. Keitz, 8129 Nuernberg St. Nothing doing. But when Carl got home he discovered he'd missed a five-alarmer in the Dougherty Lumber Co's. 68th St. yard, writes John.

Another fan-away-from-home was Tom S. Jewett, Jr., 6442 McGee St., Kansas City 13, Mo., who got a VIP welcome in New York City. Among those who shepherded Mr. and Mrs. Jewett about the city was Jerry Daly, writer of the excellent column, "Firecrackers" in the "Chief" the weekly newspaper of the New York City employes.

"Delightful couple!" said Jerry in his column. "He is a red hot buff and the only honorary fire department personality in Kansas City. Mrs. Jewett is very tolerant and understanding of Tom's hobby. . . . Mr. Jewett is quite an enthusi-

Poised in a corner of your plant, like a deadly serpent, fire is ready to strike!

At dip tanks, switch gear, transformer vaults.

The safest move is to install a KIDDE fully Automatic CO_2 Extinguishing System.

Kidde

Walter Kidde & Company, Inc.
1033 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

Don't get rattled . . .

for your Kidde dealer

ast. He has more badges, shields, cards and credentials than Gordon Mullins, the most enthusiastic buff in captivity."

Tom, who is an advertising executive for the Kansas City Star, also writes that he picked up seven more books for his steadily growing fire library. One of them is all in German. "Can't read a word of it," says Tom. He did learn that the book is "Fire—Its Defense and Offense," by von Moltior.

Fire Fan Par Excellence Harold R. Bruno, star reporter for the Chicago City News Bureau still maintains that he has been cured of the fire fan hobby. Yet he is known to be the first reporter out of the Chicago Police Department Press Room when the 2-11 alarm strikes for a fire in his coverage district. He can get away with it too, because his city editor, Ed Eulenberg, is just as much a fan as Hal. Great Guys! Both of them. And I say this even though I had to suffer under Eulenberg's whip while I was a cub police reporter in Chicago. There was only one thing that Eulenberg would take my word on: any information on fires. And at that he often caught me up.

It's too late now to make any difference in Hal's job security, but he still keeps secret the time that he arrived to cover a 3-11 fire and stuffed his pencil and copypaper in his pocket while he pulled on boots and firecoat to help the boys "lead out." Meanwhile, the city desk is calling all bars in the area trying to track down their reporter so they could find out what was going on at the fire. P.S.: He was able to give a passable accounting later!

Anyway, there's probably more firefans per square foot in the Randolph St. city room of the CNB than anywhere else which accounts for this item on CNB copypaper from Brother Bruno:

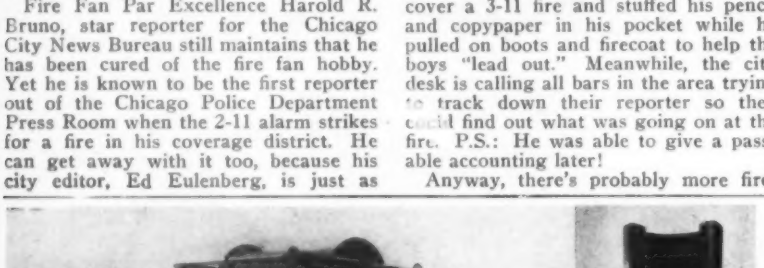
"The Chicago Firefans Association received its charter from the state of Illinois last May to form the first recognized fan club in the nation's second largest city since the old Firefans Club went out of existence in 1924.

"According to President James M. Kirkley, who is a fire alarm operator, the purpose of the club is to assist in anything that will benefit the department and to bring together men interested in the Chicago smoke-eaters.

"Other officers are Willard A. Burns, vice-president; John Graham, secretary; and John Loughrin, treasurer. In addition, there's a five-man board of directors and 37 members.

"To qualify for membership, an applicant must be recommended by a member of the fire department. Dues are $25 per year and firemen are eligible to join. For identification, the members have lapel buttons with five crossed bugles and hope in the future to have official badges or cards."

Striking it out for another month, as these Chicagoans would say, I can only add that I hope you continue to keep the anecdotes coming in this direction. The address is the same: Paul Ditzel, Labor Editor, Los Angeles Daily News, Los Angeles 54, Calif.



BAR-WAY COUPLINGS...

For booster and high pressure fog lines

There are four good reasons why the fire fighters specify BAR-WAY couplings. Four reasons why BAR-WAY couplings are growing in favour with firemen, hydraulic engineers and others who insist on the best.

- **SAFETY**—The coupling becomes the *strongest part of the hose line*. Tested to 3000 pounds pressure and 500 pounds pull.
- **FULL FLOW**—No suppression of flow in coupling. No shrinkage of hose at coupling.
- **FLEXIBILITY**—Reels smoother. Easily replaced. Nothing to catch on corners or underbrush.
- **BETTER MADE**—Accurately machined, always the same, interchangeable. WILL NOT FAIL.

Send for our free pamphlet. Gives detailed specifications for all types of pressure hose, ID and OD.

BAR-WAY MFG. CO., STAMFORD, CONN.

WEST COAST REPRESENTATIVE { W. D. RIGDON, 383 Brannan Street, San Francisco 7, Calif.

World Wide Fire News

By Roi B. Woolley

New A-Defense Plastics Disclosed

Scientists of the American Chemical Society, in session in Chicago Sept. 10, revealed the development of new heat, fire and stress-defying materials for atomic age defense and peaceful uses.

A promising line of plastics was announced by two experts of the Hooker Electrochemical Co. of Niagara Falls, N. Y., who have worked out a method of making a substance called C-56 containing large amounts of chlorine. The material is prepared from common salt and petroleum.

Basic materials of synthetic rubber and plastics, such as styrene C-56, form a new type "polyester plastic" which is then reinforced with fibre glass. The results are products of great strength and toughness capable of heat and flame resistance to a striking degree.

The new materials have a wide range of use, including shelters against air raids, wherever it is necessary to prevent spread of flames and to offer resistance to too rapid destruction from heat.

One titanium type of ceramel can resist a pressure of 14,000 pounds per square inch at a temperature of more than 2200 degrees F. Scientists at the Dayton Flight Research Laboratory also have developed a technique of using materials containing zirconium dioxide to defy temperatures of more than 4,000 degrees F.

* * *

Boston Gets Gasoline Scare!

About five square miles of the City of Boston was roped off on the night of Sept. 9th, as authorities sought the source of an underground pipeline leak that spilled an estimated million gallons

of raw gasoline over lowland sections.

Residents of thickly populated areas were warned by officials not to light matches. Fire fighters stood by with equipment ready to douse immediately any blaze in the gasoline-soaked district.

The liquid flowed toward Suffolk Downs race track and a large housing project. Fire and police boats patrolled the entrance to Chelsea Creek, site of several oil firms.

Authorities reported they had found the general area of the leak and were probing under the surface for the source, which is believed to be a faulty valve or broken pipeline.

* * *

Water Gun Atop Factory Mystifies Tourists

The natives know what it's all about, but the tourists go ga-ga when they see what looks like a big anti-aircraft gun atop the canning factory at Lubec, Maine.

"No, it ain't an anti-aircraft gun," the patient residents explain to inquirers, "that's Bob Peacock's water gun."

Robert L. Peacock, of the Peacock Canning Co., owned by his family, is also head of the local fire department—besides being an executive of the firm. And he's naturally worried about fire protection in his town. So, he decided to mount a powerful turret gun in the very heart of the downtown section—to wit, on his canning plant—from where it can hurl a stream of water on half the buildings on the main stem.

Thanks, WILSON DAVIS.

* * *

Five Find Silence Deafening

Four young women were only slightly hurt, but were mightily scared, the morning of August 31, last, when a 16-ton Army truck barged into the rear of their automobile near Bristol, Conn. The scare came after they learned that the vehicle that had collided with them had a cargo of explosievs.

The driver of the truck, a civilian employee of the U. S. Government, only the preceding Friday had been honored for 186 months of accident-free driving.

Police said sealed orders prevented disclosure of the exact nature of the explosives, and their destination. Witnesses to the accident said they couldn't understand why the cargo didn't go off.

The four females were treated for injuries at Bristol Hospital. The load ultimately wended its precarious way to its 'unknown' destination. The fire and police forces of the area breathed easier.

* * *

Audience Gets Real Jolt from "Atomic Picture"

An explosion in a gas pocket under the sidewalk in front of Loew's National Theatre, the Bronx, was audible the night of August 23, last, to some of those inside the theatre, who were watching with bated breath the film called "Atomic City."

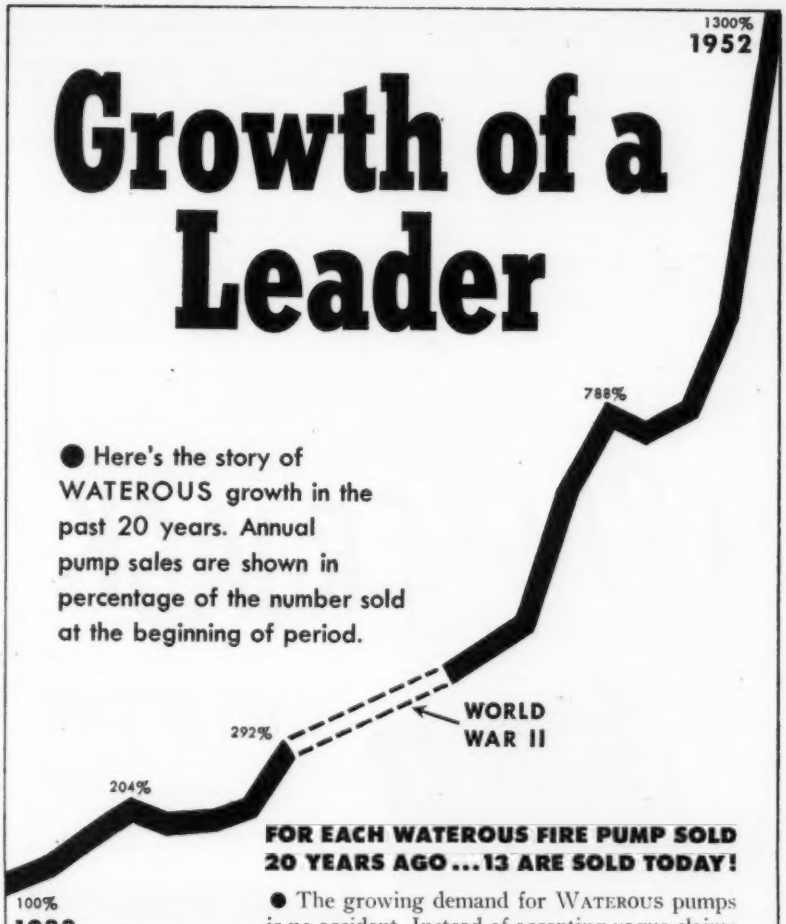
"Patrons in the rear rows jumped" was the observation of the theatre manager. Firemen and police were called, but a Consolidated Edison crew dealt with the situation, which came about when a spark from a 13,000 volt transformer, it was said, ignited the gas pocket. The blast caused a section of the sidewalk to bulge.

* * *

Seven Died—Two Firms Fined Fifty Bucks

On March 3, last, seven persons died in a fire in a Bronx factory. Various charges of negligence and violation of

Growth of a Leader



● Here's the story of WATEROUS growth in the past 20 years. Annual pump sales are shown in percentage of the number sold at the beginning of period.

FOR EACH WATEROUS FIRE PUMP SOLD 20 YEARS AGO ... 13 ARE SOLD TODAY!

● The growing demand for WATEROUS pumps is no accident. Instead of accepting vague claims and trick performance, buyers today are making exacting comparisons, insisting on simplicity of operation, accessibility, durability of materials, and reliability of performance. More and more are insisting upon a thoroughly proven pump for their new fire engine.

For nearly 70 years, WATEROUS has been a leader in the fire fighting field. Today, WATEROUS pumps are standard equipment with leading apparatus manufacturers.

If you are in the market for new equipment, "Preferred Fire Pump Specifications" will help you obtain the proper pump for your needs. For a free copy, write WATEROUS COMPANY, St. Paul, Minnesota.

FROM 1886 .... TO 1953

Waterous

DEPENDABLE PUMPS

SINCE 1886

fire safety codes were brought against the owners of the building, and to a worker who allegedly was using an acetylene torch which touched off the fatal blaze.

Last August the court finally got around to settling the case and two corporations were each fined $50 in Bronx Municipal Term Court. At the same time the acetylene torch operator was ordered to appear in September for sentencing on a charge of operating the torch without a permit, to which he pleaded guilty.

A third corporation was freed from blame, as was another individual. A third person pleaded innocent and his case was adjourned.

The Utility Airlite Corporation and Utility Textile Products Inc., paid fines of $50 for having permitted the storing of more than the lawful maximum of forty gallons of lacquer on the factory premises at 570 River Ave., the Bronx. The lacquer was found in the building after the fire. It actually had nothing to do with the blaze itself, which started when the acetylene torch set fire to 200 pounds of rubberized hair used for furniture.

* * *

Pastor's Words Build Fire Under Flock?

A preacher in Waynesboro, Va., took his congregation to task for the light summer attendance at church services.

"If we set the church on fire, I'm sure everyone would turn out," said James Miller assistant pastor at the First Presbyterian Church.

Not so long after, five church officers left their pews seeking the source of smoke which was seeping into the sanctuary.

They found it: the public-address system had caught fire.

Thanks, IRVING JOHNSON.

* * *

Fine! Fine!—Magistrate Gets Tough!

A hospital orderly drew a $50 fine, and a juristic scolding, July 25th last, for carelessly dropping a cigarette on his bed in the men's dormitory at General Hospital, Paterson, N. J., and causing a minor mattress fire.

He was arrested at 2:30 o'clock the morning of the 25th, after firemen lost no time responding to an alarm from the institution and dousing the mattress fire.

Brought before Magistrate John A. Masiello on a "disorderly person" complaint, signed by a member of the hospital staff, the magistrate slapped the $50 plaster on the defendant, who police said, was under the influence of alcohol and smoking in bed.

According to Paterson Fire Chief Hobart Strathearn, this is the same magistrate who previously soaked a false alarm 'bug' to the tune of $500 fine, gave him a suspended jail sentence, and revoked his driver's license for an indefinite period.

Orchids to Magistrate Masiello!

Persons in the News

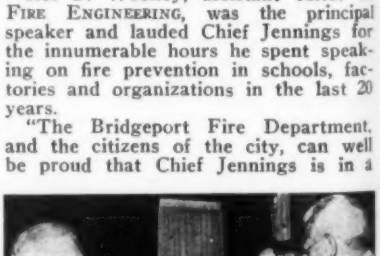
Chief S. E. Jennings Honored

Sylvester E. Jennings, recently appointed Chief of the Bridgeport, Conn., Fire Department, to replace the late Chief Martin J. Hayden, who died following injuries received at a fire in that city December 6, 1952, was the guest of honor at a testimonial dinner in the Ritz Ballroom, Bridgeport, on September 9.

City and state officials and members of the Bridgeport Fire Department gathered to pay tribute to the new chief. It is estimated that more than 800 were on hand. Chief Jennings was the recipient of many gifts by his friends.

Roi B. Woolley, assistant editor of FIRE ENGINEERING, was the principal speaker and lauded Chief Jennings for the innumerable hours he spent speaking on fire prevention in schools, factories and organizations in the last 20 years.

"The Bridgeport Fire Department, and the citizens of the city, can well be proud that Chief Jennings is in a



Congratulations are extended to Fire Chief Sylvester E. Jennings, new Chief of the Bridgeport, Conn., Fire Department, at a testimonial dinner in his honor held in that city, September 9. In the photo, left to right, are the Reverend William H. Alderson, D.D., pastor of the First Methodist Church and brother of Fire Chief John H. Alderson of the Los Angeles Fire Department; Police Superintendent John A. Lyddy, Chief Jennings, Mayor Jasper McLevy and Oliver T. Osborne, President of the Board of Fire Commissioners.

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position to carry on in the same manner as his predecessors," Mr. Woolley said during his address. He also spoke on the modern methods of firefighting as compared to those in vogue years ago.

Other speakers included Mayor Jasper McLevy, of Bridgeport; Congressman Albert P. Morano, of Connecticut; Oliver T. Osborne, president of the Board of Fire Commissioners, and John A. Lyddy, Supt. of the Bridgeport Police Department. David Leach, of New Haven, a member of the Board of Police Commissioners in that city, was toastmaster. TOM MAGNER.

Chief R. L. Woolard Retires

Fire Chief Robert L. Woolard retired as Chief of the Norfolk, Va., Fire Department on October 1 in a triple ceremony that saw two of his right hand men, Inspector W. R. Creekmur, and Fire Alarm Operator F. J. Corleto step down from active duty with him.

The combined services of the three men amount to almost a century, with Chief Woolard's 35½ years accounting for the longest span.

All three are retired optionally; that is, they are not waiting for the mandatory retirement age of 65.

Chief Woolard, 60 years old August 30, joined the Fire Division as a private on June 1, 1918, but in November of the same year he resigned. He was persuaded by the then Fire Chief R. F. McLaughlin to accept reappointment in August, 1919, however.

The chief's rise in the department was rapid. Less than a year and a half after he rejoined the force, he was promoted to a captaincy, and five and a half years later he was made a deputy fire chief.

In January, 1947, Woolard was made chief of the Fire Division, the climaxing appointment of his 35½-year career.

Inspector Creekmur, 61-year-old deputy chief in charge of the Fire Prevention Bureau since February, 1948, joined the Fire Division in September, 1926. In 1941 he was appointed a captain, a rank he held until he was given the Fire Prevention Bureau.

Corleto, who has worked in the signal center of the division since November, 1943, joined the Fire Division August 27, 1919.

Chief Morgan Retires at Fairmont

Fire Chief W. J. "Curley" Morgan retired September 1 as head of the Fairmont, W. Va., Fire Department. He became Fire Chief in November, 1945, upon retirement of Chief Ralph Doolittle and, since he came to office, the department has been practically doubled in size.

The retiring Chief joined the department 24 years ago and has been active in West Virginia firemanship training.

Oregon Fire Marshal Reports for 1952

The annual report of the Oregon State Fire Marshal, Robert B. Taylor, continues to be the most comprehensive statistical document published by any state coming to the desk of this editor. The 104 pages of the 1952 report, just released, are jam-packed with the factual accounting of the fire service—fire losses, fire protection and prevention data, training, etc.

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Above and at bottom are two on-the-spot pictures showing a HALE Type FZZ Portable Fire Pumping Unit fighting a brush fire from a moving truck. An FZZ can be mounted or carried on any type of equipment, making it a real "work-horse" for fighting brush, field and forest fires while in motion. Booster tank is used for a source of water.

The Hale Type FZZ is a powerful, sturdy, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping.

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Above—FZZ Relaying through Major Pumper.

Above—FZZ Pumping Foam (Foam proportioner built in if specified.)

The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ½".

Note: Discharge adapter can be supplied for use with 2½" hose.

Available in carrying frame; mounted on two wheels; or mounted on rubber-cushioned steel channels.

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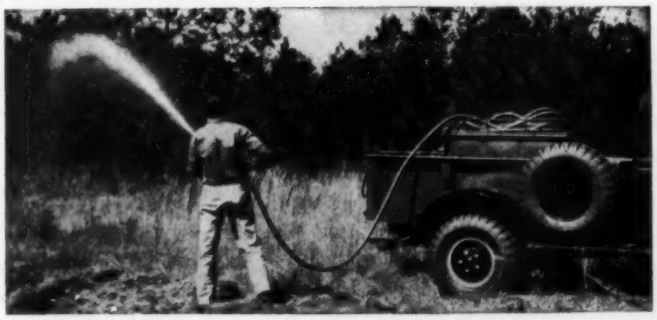

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The engine and pump are standard Pacific Units and have been fully tested and approved.

Optional equipment.

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Length	28¾ inches
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GA-8 (without starter)	115 lbs.
GA-8-S (with starter)	140 lbs.

PERFORMANCE

Pressure	G.P.M.
50	26
100	24
150	22
200	21
250	20
300	16

Normal operation is 20 G.P.M. at 250 lb. pressure.

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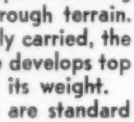

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The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Chief Sees Red Over "Blue Blazer" Fire Drink

Up until Sept. 1, last, scarcely a soul of the Town of Greenwich, Conn., had ever heard of Blue Blazer—much less tasted one.

But then, according to the wayward press, Fire Chief Stuart Potter declared the drink "hazardous" and now 'tis said, everybody is screaming blue blazes for Blue Blazers, and shimmering blue arcs are brightening all the town bars these nights.

Fire Chief Potter is sorry he ever sounded off and he just hopes and prays the craze for Blue Blazers burns itself out before the town burns itself down.

For the laity, a Blue Blazer—probably born in the Jazz Age—consists of three and one-half ounces of scotch and an equal part of boiling water. The scotch should be in one silver container, the water in another.

At this stage, the bartender pours some more scotch into a spoon, lights it, and then thrusts it into the scotch in the silver container (everybody agrees you must have silver containers—but nobody knows why). When the scotch is burning nicely the bartender pours the two liquids from container to container, holding it high in the air and creating a blue arc. The concoction is served flaming to the customer.

Seems the whole thing started when a local reporter, seeking news in the bar of the Pickwick Arms Hotel, Greenwich, dipped into an old recipe book the bartender had lying around. He came across the Blue Blazer and later asked Chief Potter whether he would allow bartenders to mix it. The Chief—who incidentally takes nothing stronger than ginger ale—said he wouldn't have authority to prevent people from making or drinking a Blue Blazer (sometimes called a scotch toddy) but said it was dangerous and recommended that no bartender serve it.

The reporter dutifully put this all in his paper, and the run was on—Greenwich Time. Everybody, it seems, got hot about Blue Blazers. "I've been running this place for 29 years," said the proprietor of Town House, "and I never had call for a Blue Blazer until last week. Now we're swamped with 'em."

The Pickwick Arms, loyal to its fire chief, is not serving them. "The only hazard about it I can see," said its bartender, "is limited to the bartender himself. If he spills it on his shirt, it's his fault and the customer can't get singed."

Meantime, if you see Chief Potter in his red chariot responding to an alarm, don't stop him to ask "another Blue Blazer blaze"?

* * *

Gabriel Blows a Mean Fire Trumpet

Gabriel blew his horn in vain and when nobody paid him any heed, Gabriel flew the coop.

Gabriel, or to give him his full name "Gabriel Heater," is a pet gander which made its home in the rear of a gasoline station operated by Gregory E. Cassidy in South Britain, Conn.

At an early hour on last July 23, slumbering neighbors were awakened by Gabriel's frantic honking. But nobody troubled to find out what was troubling Gabriel

At 5:30 A.M., George Stannard, on his way to work, discovered the two-story building housing the gasoline station and job printing plant, enveloped in flames.

The building burned to the ground before three fire companies from nearby Southbury could do much about it. Cassidy, the owner, could not immediately estimate the loss.

And Gabriel—after the blaze had died down the neighbors spotted the unsinged gander strutting out of the woods into which he had flown after vainly trying to give the alarm.

Thanks, TOM MAGNER.

* * *

Fire Chief Averts Tragedy Threat; Nuptials Proceed

It was a hot night for a wedding at the First Congregational Church, in Alton, Ill., on Aug. 28, last. The church was crowded, with extra chairs in the aisles for the overflow attendance at the wedding of Miss Barbara Lee Henderson to Fritz Roland Nilsson. The singing was over, and the pastor, Rev. Paul Zeicke, was performing the marriage ceremony.

As the climax to the happy event neared, stark tragedy impended when one of the burning candles, fanned by a breeze from an open window, near the altar, tumbled to the carpeted floor, the blazing wick landing near a synthetic palm decoration.

Fire in the packed church could well have brought disaster. But fate willed it that Alton Fire Chief James Lewis, with his wife and son, were seated in the front row at the wedding.

The Chief saw the candle tumble. He quickly and quietly stepped forward, snuffed the blaze between his fingers and as quickly returned to his seat.

Most of the congregation never knew what had happened. But one witness wrote the local paper: "Within seconds the Chief extinguished the flame, looked the situation over, decided it was safe for the time being, and returned quietly to his seat. But you can imagine another 60 seconds, a hot night, a crowded church with doors closed, a carpet bespattered with paraffin and a flame dropped into the middle of it—all behind the altar decorations."

Questioned about the episode, Chief Lewis said he didn't know anybody had noticed his actions. The fire had burned a hole in the carpet but he said he got it out and he later advised the church custodian to sprinkle some water on the carpet in the area of the fire. When asked how he extinguished the wick, he said: "I spit on my fingers and rolled the wick between 'em."

Thanks, F. J. PIEPER.

* * *

A "Bird" of a Nightmare

Firehouse nightmares are nothing new, and there have been some weird and wonderful tales about 'em, according to truck house gossip. But this 'un from a contrib', who prefers to remain anonymous, is worth a notice. It comes from

Idaho Falls and refers to a happening in that city's department—but the fire company, and the "victim," are not identified.

It might have been a bird, a plane, or even Superman, says the newspaper account, but—City Fireman wasn't staying in that bed any longer—and he got the bird from his fellow fire fighters, who had a tall one to tell on their unfortunate pal on a certain morning after he had had a major-production nightmare the night before, while bunking in the fire station dormitory.

The dreaming fireman, it seems, woke up with a yell that a mouse was in his bed. Then he shouted that it was a bat—then it was a bird. Finally, he came out of his dream to the ribald ribbing of his dorm' mates.

After the victim had become thoroughly awake and fellow firemen had investigated his bed for livestock, he is said to have returned to his downy downy to sleep it off.

* * *

Rostell Jones, Unsung Heroine at 14

In East Chicago, Ind., a 14-year-old girl, Rostell Jones, helped 16 persons to escape from a fire which swept her home Sept. 19th, last, dropped a younger brother to safety from a second story window, then fell back into the flames and perished.

The little heroine smelled smoke in the building at 1931 Greenwood street and hurried through the building arousing the 16 occupants. She grabbed her 12-year-old brother John, and dropped him from a window as the fire flared through the two-story frame building, intensified by a 300-pound drum of heating fuel.

Witnesses said that when it was the girl's turn to leap from the window, she remained, then disappeared. Her body was found in the wreckage after firemen from seven fire companies had extinguished the blaze.

* * *

Off the Tape

John E. Lister, volunteer fireman of Oldsmar, Fla., urged the Oldsmar Fire Department to buy a resuscitator. He won his point and was given the job of picking one out. It was used for the first time Sept. 5, last, and it saved a life—Fireman Lister's. He was recharging a refrigerator when he was overcome by sulphur dioxide gas. The resuscitator was used on him by a Navy corpsman, Ralph Tinsley. . . . William Seltsky of Hartford, Conn., got tired of hanging out his "Fire Sale" sign—especially since the fires have left his store alone. Twice within three weeks, however, his jewelry store received water damage from rubbish fires in the store above his. (Thanks, Walter Bachinicke, Jr.). . . . An electric iron which somebody forgot to turn off started and put out a fire in an apartment house in Washington, D. C. Firemen who answered the alarm said they found that the iron had burned through an ironing board, then through the floor where it melted a lead water pipe. By the time the Brothers arrived the water spray from the water pipe had extinguished the smouldering fire. . . . Just in case you're interested, 574 persons died during the Labor Day Weekend from accidents. Of these 405 died in traffic accidents and 99 from other causes, including fire.

(Above) — Ready to go! Scott Air-Paks assure ½ hour minimum duration at extreme exertion. Weight as worn, 29½ lbs.

Greensboro's Fire Chief, C. W. Wyrick, relies on SCOTT AIR-PAKS. With Air-Paks, his men get through smoke to the source of a fire *fast*, before intense heat or crumbling buildings make it impossible. SCOTT AIR-PAKS slip on in seconds, supplying fresh, cool air and relaxed breathing to firemen . . . no matter how tough the going.

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Questions and Answers

Pumping Down an Incline

To the Editor:

A pumper is pumping through 600 feet of 2½-inch hose laid down an incline 100 feet long below the pumper. A 1⅛-inch nozzle is used. The pumper is pumping at 150 pounds pressure. What is the nozzle pressure? R. V.

Answer: The question you give does not include sufficient information to enable us to answer it. You state that the hose is "laid down an incline 100 feet long below the pumper." Is the incline 100 feet, or is the vertical distance from the pumper down to the level of the nozzle 100 feet?

We shall, for the purpose of solving the problem, assume that the vertical distance between the nozzle and the pumper is 100 feet. The solution based on this assumption is as follows:

The pressure represented by 100-foot head of water is 100 x .434, or 43.4 pounds.

Add this pressure to the pressure created by the pumper, 150 pounds, and we have a total pressure of 193.4 pounds.

This pressure we shall consider as the total, or corrected, engine pressure.

The formula for nozzle pressure is as follows:

N. P. = E. P. ÷ (1.1 + KL)

K, for 2½-inch hose and 1⅛-inch nozzle, is .167.

L, the number of 50-foot lengths of hose in the line, is 600 ÷ 50, or 12.

N. P. = 193.4 ÷ (1.1 + .167 x 12)

= 193.4 ÷ (1.1 + 2.004)

= 193.4 ÷ 3.104

62 pounds, approximately.

This is the pressure at the 1⅛-inch nozzle.

Spontaneous Heating

To the Editor:

Several months ago an examination was held for promotion to lieutenant. The following questions were asked at this examination relative to spontaneous heating of certain combustible liquids.

1. Drums of linseed oil are: a. high; b. low; c. moderate; d. very slight.

2. Barrels of turpentine are: a. high; b. low; c. moderate; d. very slight.

To what extent is a barrel of turpentine and a drum of linseed oil, per se, subject to spontaneous heating? S. A.

Answer: Drums of linseed oil are considered subject to very slight spontaneous heating.

Drums of turpentine are considered as "low" from the standpoint of spontaneous heating.

These materials, when mixed with foreign matter such as rags, etc., have a higher rate of spontaneous heating.

Magnesium Fires; Heavier-than-Air Gases

To the Editor:

There has been some controversy on the correct answers for two questions in one of your books that I would like to have a clarification on.

The questions are in "Promotional Study Course for Firemen."

1. Lesson 12, question No. 14: Sand is very useful for extinguishing aluminum dust fires. True.

2. Lesson 12, question No. 16: Heavier than air gases escape from buildings in a similar manner to that in which water escapes or finds its way out. True. C. H. W.

Answer: Statement 1. "Sand is very useful for extinguishing aluminum dust fires" is true. The Crosby-Fiske-Forster "Handbook for Fire Protection" states, regarding aluminum dust fires, 'Smother with sand, ashes, or rock dust. Do not use water which may cause explosion.'

Statement 2: "Heavier than air gases escape from buildings in a manner similar to that in which water escapes or finds its way out" is true. Gases which are heavier than air seek lower levels in the atmosphere and, in the case of a building, will find their way downward to lower points, in very much the same manner as water would seek lower level. If the gas were lighter than air, it would rise in a manner similar to heated air at a fire.

Ventilation; Fire Alarm Devices

To the Editor:

1. In fighting a fire of considerable progress anywhere in an ordinary building, is it the proven, best, modern practice to ventilate, if necessary,

POWHATAN

QUARTER TURN SHUT-OFF SIAMESE

COMPACT DESIGN.

POSITIVE AND EASY SHUT-OFF UNDER ANY PRESSURE.

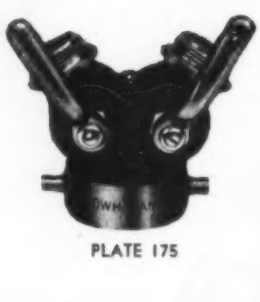

PLATE 175

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This is but one item in our vast line of precision tooled, strongly built, brass fire-fighting equipment. Since 1892 our single aim has been—improvement of our products—and repeat orders from Fire Departments all over the United States have proven the value of such a policy.

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with hole in roof, or is it better to leave the building tightly closed and fight it thus?

2. If a fire alarm device is to be installed in any ordinary building which will be actuated by 130 degrees heat, would it be reasonable to expect such device to operate in any room, regardless of proximity to origin of fire, or would it be necessary to mount such device in every room because the heat would not travel to the one location in good time? W. B.

Answer: 1. Where fire lines are ready to follow up in extinguishing fire, ventilation is a very valuable practice. Until ventilation was generally employed, many buildings were total losses, because of the inability of the fire department to get in and extinguish the fire at close range. Where proper ventilation is provided, firemen can usually go right to the seat of a fire and make quick work of extinguishing the blaze. Today ventilation is considered an essential operation in every fire department of size in this country.

Answer: 2. With regard to fire alarm devices, they should be placed in each room. If not so placed, and if confined to but one room, the fire may have opportunity to gain dangerous headway in another room before heat would eventually reach the actuating device.

Fire alarm systems for buildings are principally of two types; individual thermostatic devices which are placed one in each room and operate independently, or tube (tubing containing air, or special fire alarm wire which is stretched through the building) passing through each room. At a central point these enter actuating apparatus, which record the alarm and locate the fire.

In the latter case, the alarm is transmitted from the room in which the fire has originated to a central point, and thus prompt notification is possible.

Uniformed Firemen Make Junior Fireman of Doomed Boy

Gabe Farkas, 4-years-old, lives a block away from Ladder Company 45 of the New York Fire Department at 413 W. 181st street, Manhattan. Gabe is a red hot buff despite his youth and sickness and whenever he can, he gets around to visiting the station of his idols. But these visits have been growing less for Gabe is suffering from a megalocelphalic condition that has been enlarging his head since he had pneumonia at the age of eight months. Doctors have told his parents that the child probably will die before next summer.

So, when Mrs. Farkas would bring Gabe to the fire station he would be allowed to sit on the shiny fire truck and play by the equipment. And when she happened to mention that the lad also was fascinated by a toy fire truck in a store window, the firemen of the company took action, passed the hat, and bought the toy.

On Sept. 18th Gabe was presented his fire truck by Fire Lieutenant Joseph Mohin and Fireman Jack Stewart, along with a fireman's dress cap and a badge that made him an honorary member of the Uniformed Firemen's Association of the New York Fire Department, which chipped in with Ladder 45 Brothers to make Gabe's last days happier ones.

THE BOOTS THAT HELP FIGHT FIRES

—and stand up to this tough job *one third longer* than ordinary boots because they're made of an extremely tough rubber compound.

Designed for firemen exclusively with many special features: Thick-cleated, white, wrap-around outsole for maximum foot protection and visibility; built-in maplewood shank for comfort on ladders; stay-open reinforced collar.

CHECK OFF THESE MANY REASONS WHY U. S. FIREFIGHTER BOOTS GIVE YOU UNBEATABLE VALUE AND PROTECTION

- Thick-cleated outsoles for perfect grip.
- Built-in sturdy maplewood shank for ladder climbing.
- High skirt that doubles down but will not drag.
- Reinforced wide leg opening for fast, easy on and off.
- Wool felt lining with air-cushion insole.
- Smooth, snag-resistant 8 oz. duck construction.
- Firmly anchored, large pull-on loops.

U. S. Royal Firefighter Coats

100% waterproof coats take a drenching, yet keep a man dry. Sturdy black rubber with warm, napped maroon-colored linings. Roomy, 2-piece body—raglan shoulders for action; fly-front in instant snap-and-dee fasteners; large patch pockets. All seams are cemented, outside gum-strapped; entire coat is then vulcanized.

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Obituaries

John J. McCarthy Dead

John J. McCarthy, assistant chief of the New York Fire Department from 1941 until his retirement at the end of 1945, died of a heart ailment Sept. 25 in Rockaway Beach Hospital, Queens, N. Y.

As senior assistant to the late Patrick Walsh, Commissioner and Chief of the department, he performed duties that were analogous to those of a chief of department.

Mr. McCarthy, whom the late Fire Chief John Kenlon called the "spark-plug" of the department, was responsible for many reforms in procedure during his thirty-two years of service. After his retirement he became fire protection consultant to the New York State Hotel Association, a position he held at his death.

In 1941 Chief McCarthy was placed in charge of defense activities of the Fire Department. Two years later he declined a high-ranking commission with the Allied Military Government, remaining here to supervise the department's wartime fire protection activities, including the recruiting of 56,000 auxiliary firemen.

In World War I, as an Army first lieutenant, he was fire marshal of the New York Port of Embarkation.

He won the department's Administration Medal in 1924 for his method of more quickly dispatching fire companies on telephone alarms, and again in 1939 for his work in organizing the Auxiliary Fire Force. His name appeared on the the department Roll of Merit four times.

Mr. McCarthy revamped the department's book of rules and regulations in 1926.

He wrote "The Science of Fighting Fire," for professionals, citizens, volunteers and auxiliaries, in 1945, and had previously written a technical manual for firemen and auxiliaries. He founded in 1940 the departmental quarterly magazine W-N-Y-F, of which he became managing editor.

In 1949, Governor Dewey appointed Mr. McCarthy to the Fire Advisory Board of the State Division of Safety. He also had served on the city Board of Standards and Appeals.

Born in New York, he entered the Fire Department in 1913, became a lieutenant in 1921, a captain in 1923, a deputy chief in 1933 and assistant chief in 1941.

He was a member of the International Association of Fire Chiefs, the National Fire Protection Association and the Advisory Council of the State Joint Legislative Committee on Multiple Dwellings and Housing.

He was also a former president of the Chief Officers Association of the New York Fire Department and a member of the Fireman's Cycle Club and the Fire Department Post of the American Legion.

ANY TOWN CAN HAVE A WATER TOWER—WITH AN

Eastman LADDER PIPE

A VERY necessary piece of equipment in every fire department—the Eastman is standard in fire departments everywhere. Clamps on ladder firmly—action of stream from vertical to horizontal to almost directly down (see illustration).

THE Eastman Ladder Pipe is quickly and easily attached or detached — elevating handle detached by removing snap pin. All nozzles fitted with Barker turbulence eliminator and stream perfector to assure solid cutting streams. Here's the finest in ladder pipes—and you'll never know how soon you'll need one!

See your dealer—or write

SAMUEL EASTMAN CO., Inc.
CONCORD, NEW HAMPSHIRE

Ex-Chief J. A. Scruggs Dead

Ex-Chief Jesse A. Scruggs, of the Nashville, Tenn., Fire Department died on September 6, at his home in that city. He had suffered from a heart ailment for a number of years.

He retired from the fire department in November, 1943, following 40 years of service. As assistant chief, he introduced first aid service to the Nashville department in 1930. At that time emergency first aid was practically unknown in Nashville. He also was founder of the fire department's custom of repairing broken toys to make gifts for needy children.

Active in a number of other charitable operations as chief, he was honored five years ago when the department named a fire engine after him.

Mr. Scruggs worked his way up through the ranks, beginning as a substitute fireman, Feb. 14, 1903. Nearly four years later, on Dec. 18, 1906, he became a regular fireman.

Then in August 1918 he was promoted to lieutenant. He became a captain in April, 1923, and was named second assistant chief March 1, 1928. On May 24, 1938, he became chief. H. D. Demonbreun, present chief, succeeded him in 1943.

E. J. Hickey Dead

Edward J. Hickey, 63, Fire Marshal and Commissioner of Connecticut State Police, died Sept. 22, following a protracted illness.

Long a friend of the State's fire service, Mr. Hickey was credited with having built the state police to a top position among law enforcement agencies; its officials operated closely with Connecticut fire fighters in arson investigation and prosecution, and fire prevention matters.

Mr. Hickey started as a detective in 1922 in the Office of the State Attorney General. He won acclaim as the man who organized and directed the hunt for Gerald Chapman, the mail robber.

who was hanged in 1925. During World War I he served in Naval Intelligence. In 1921 he became a State Trooper, to resign the next year to become a Hartford County detective.

He was active in organizing Connecticut's Civil Defense in World War II. For a time he was administrator of the State's War Council. From 1947 to 1950 he was State Coordinator of Civil Defense.

Ex-Chief F. Von Holtz Dead

Frederick Von Holtz, 58, former Chief of the Southport, Conn., Volunteer Fire Company, died on Sept. 22 while at work in the C. O. Jelliff company's plant in that town. Death was attributed to a heart ailment.

Well known in Connecticut firefighting circles, Chief Von Holtz served as Chief of the Southport Fire Company 19 years, retiring five years ago. After his retirement he served as a member of the Fire Company's board of directors. A master mechanic at the Jelliff Company, Mr. Von Holtz learned his trade with the firm when a boy and had remained with the firm more than 40 years.

He is survived by his wife, Anna Von Holtz; a son, Joseph Von Holtz, serving with the Navy, and a daughter, Mrs. John Towler, of Fairfield.

TOM MAGNER.

I.A.F.C. Conference

(*Continued from page* 925)

Britain, Conn., in a spirited address, gave the delegates the picture as viewed by the transport industry. Truckers have their headaches, too, the speaker pointed out, protesting that his truck transportation is being throttled by municipal regulations to meet purely local situations. He argued for a sane solution of the problems arising from the movement of such hazardous goods and recommended that each community pass enabling legislation that would make Interstate Commerce Commission regulations applicable within the municipality.

There was a tendency, he said, to limit the quantity of gasoline that might be delivered by a single vehicle. The popular limit had become 1,500 gallons. Yet he believed most of the fire chiefs would agree with him that there was no relatively greater hazard involved with vehicles carrying 4,000 or more gallons. And the smaller the number of vehicles engaged in gasoline transport, the smaller the exposure to accident risk.

President George McAlpine told about conditions in Oklahoma City. Deputy Chief Harry F. Johnstone of Milwaukee reported that his department had been able to persuade oil firms and truck operators to use suburban streets reasonably satisfactory to the fire department, by friendly negotiations with the commercial firms.

Chief Edward J. McDonald of White Plains related in detail the efforts made by New York State fire chiefs to secure satisfactory regulatory measures and the problems, political and otherwise, encountered in so doing. Firemen of that state, he said, are still trying, and will continue their efforts, to secure safety measures at the state level.

Because of lack of time the instructive Symposium on "Arson Control" which was to have been held Thursday the 17th, was postponed and later cancelled.

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Here's why: Simplicity in functional design. With a simple change of segments, only one Buckeye Expander is required to expand rings for hose sizes from ¾" to 3" inclusive. Then, by merely turning the handle in the opposite direction, segments are automatically released for safe removal of hose and coupling. Easy to work, trustworthy and durable, Buckeye expands efficiency—only *one* required.

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FIRE DEPARTMENT ACCESSORIES

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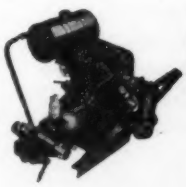

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MODEL 6600 PUMPER—Instantly Self-Priming—No waiting when seconds count

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LIGHT WEIGHT—Easily carried to source of water or fire area

NEOPRENE IMPELLERS—Pump dirty water as well as clean water—assure long life

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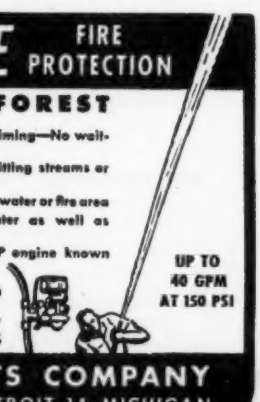

UP TO 40 GPM AT 150 PSI

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its chairman, George Clough, Fire Marshal of Nassau County, N. Y. and panel members, J. W. Ensinck, Manager Fire Underwriters Investigation Bureau of Canada, Inc., Montreal, and Raymond J. Simmons, Fire Investigation Division, Ontario Fire Marshal's Office, Toronto, all outstanding arson specialists, had prepared papers relating to the topic, and these will be published in the Association's proceedings.

Final Business Session

On Friday morning the Canadian Division held its final business session at which it formally installed the new officers and transacted other routine matters. The members then sat in with the concluding business session of the International, which likewise witnessed the installation of the officers who will direct the Association in the coming twelve months.

Chief Fitzgerald New V.P.

The only contest for the election of officers was for the post of second vice-president, with Chief Frank Burns of Grand Rapids and Chief William Fitzgerald of Seattle competing. The latter was elected by a narrow majority.

Two invitations were received by the Association from cities desiring the 1955 Conference. These were Rochester and Omaha. Decision to select was referred to the Board of Directors. The City of Houston, Texas, will be the site of the 1954 Conference, and the tentative date was set as October 19-22.

Two important changes recommended in the Association constitution and by-laws were brought before the meeting, after having been discussed by the Board of Directors which met on Monday. These called for a change in membership to permit battalion and other chiefs below the rank of head of department to be active members, and to have the Association pay half the expenses of Division secretaries to Board meetings. Both of these suggested changes were referred back for further consideration and will be again brought before the Board, and the conference of the Association in Houston.

Unanimous action was taken to rescind the motion carried at the Boston Conference to consider a separate communications section of the Association. This matter also had been thoroughly reviewed by the Board of Directors, last January, and at the Toronto meeting, which recommended the step taken by the Conference.

Resolutions of appreciation were unanimously approved, thanking the City of Toronto, its Fire Department—from Chief Joe Waterman down—the Box 12 Club, the Fire Marshal's Office, Ford Motor Co., the merchants, hotels, press and radio, the city's other services, the citizens of Toronto, and the exhibitors. The work of the Exhibit Committee Chairman, Clyde Canning of Midvale, Utah, was recognized by rising vote of thanks. Appreciation also was extended to Chief S. H. Edmonson, of Pasadena, Calif., newly appointed sergeant-at-arms, to Chief Al Koltonski, of Rutland, Vt. and the Registration Committee and others who helped make the 80th Conference a success.

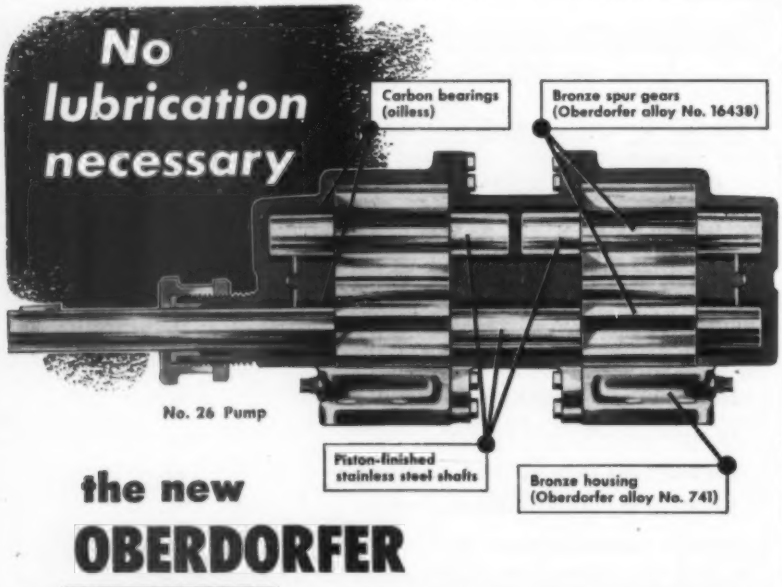
Officers installed for the coming year are: president, Chief Henry Thomas, Hartford; first vice-president, Chief Gray Burnett, Ottawa, Ont.; second vice-president, Chief William Fitzgerald, Seattle, Wash.; secretary-treasurer, Daniel B. Tierney, Arlington, Mass.; reappointed, Jay W. Stevens as executive secretary.

At the Board of Directors Meeting, held on Monday Sept. 14th, the first order of business was the selection of a new general manager to fill the position left vacant by J. E. Jagger who resigned this fall. Dr. John Gerletti, of the University of Southern California, Los Angeles, was chosen for the post. He will take over the office in January, subject to his securing a leave of absence from the university.

The Board of Directors received reports from several committees, including that on Communications, Chief Roi Woolley, which announced completion of the tentative manual on radio operation procedure. This has been submitted to all members of the Communications Committee, which includes the National Board of Fire Underwriters, National Fire Protection Association, International Municipal Signal Association, and International Association of Fire Fighters.

Entertainment Outstanding

In addition to the entertainment features already mentioned, there was an elaborate program of entertainment for the ladies. This included the get-together party and buffet supper in the Concert Hall on Monday; a ladies' fashion show and tea at T. Eaton Company on Tuesday; the tour of Toronto's Metropolitan Area and tea at the Royal Canadian Yacht Club on Wednesday; and a


No lubrication necessary
Carbon bearings (oilless)
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These booster pumps with oilless bearings will last 3 to 5 times longer than the old style equipped with plain bronze bearings. As a result of closer machining tolerances, over 20 feet of suction lift may be depended on.

The No. 13 and No. 26 Oberdorfer Pumps are more fool-proof than they have ever been. When you get to a fire you have something you can count on. It isn't necessary to wear pumps out checking them periodically to see if they will work. These pumps are metering pumps in principle and therefore must produce the same volume for every revolution of the drive shaft.

PERFORMANCE DATA—No. 26 and No. 13 PUMPS

Pump No.	Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
26	1600	120	500'—1½"	20'	150
13	1600	120	500'—1½"	20'	75

LIST PRICES — No. 26 — $200.00 No. 13 — $90.00
Slightly higher west of Rockies

FIRE PUMP DIVISION, Oberdorfer Foundries, Inc., Syracuse, N. Y.

breakfast and fashion show for ladies at Robert Simpson Co., Ltd., on Thursday.

Special hostesses were provided to cater to the wishes of lady visitors, and several score new Ford Courtesy Cars, driven by Fire Department off-shift personnel, were at the command of the delegates and guests.

The outstanding entertainment event was the annual banquet on Thursday evening. Presiding officer was James Arnott, assisted by William F. McCartney, secretary of the Fire Department. The principal guest speaker was Robert H. Saunders, C.B.E., Q.C. Chairman, Hydro-Electric Power Commission of Ontario, who spoke on "Canada and its Future."

At the banquet, which overflowed the spacious Concert Hall, badges and chiefs' hats of honorary chief in the Toronto Fire Department were presented James Arnott, sparkplug of the Conference; Chief George McAlpine, retiring president of the I. A. F. C.; Chief Gray Burnett, first vice-president of the Association, and Frank Kridel, hotelman-buff, of New York.

Incidentally, Jim Arnott, who was General Chairman of the Conference, was largely responsible for staging what proved to be one of the finest conferences of the Association. No detail was overlooked.

Following his formal speech at the Banquet, president Chief McAlpine presented to each of the Association's Divisional secretaries, and to the Headquarters' Office, specially made gavels, sounding board and container case with zipper bag, all constructed of wood grown on his Oklahoma farm.

The retiring president was given a beautiful ring by the Association, the presentation being made by Chief Henry Thomas. A number of other presentations were made to distinguished visitors. Floral gifts were presented to Mrs. McAlpine, Mrs. Waterman and others.

Following the dinner, an elaborate entertainment was staged, after which there was a drawing for many special prizes. This year, prizes were also awarded for attendance at technical and business sessions.

Acknowledgement: The photographs used to illustrate this article were taken by Bruce Young of the Fire Marshal's Office, Toronto, Ont.

August Fire Losses

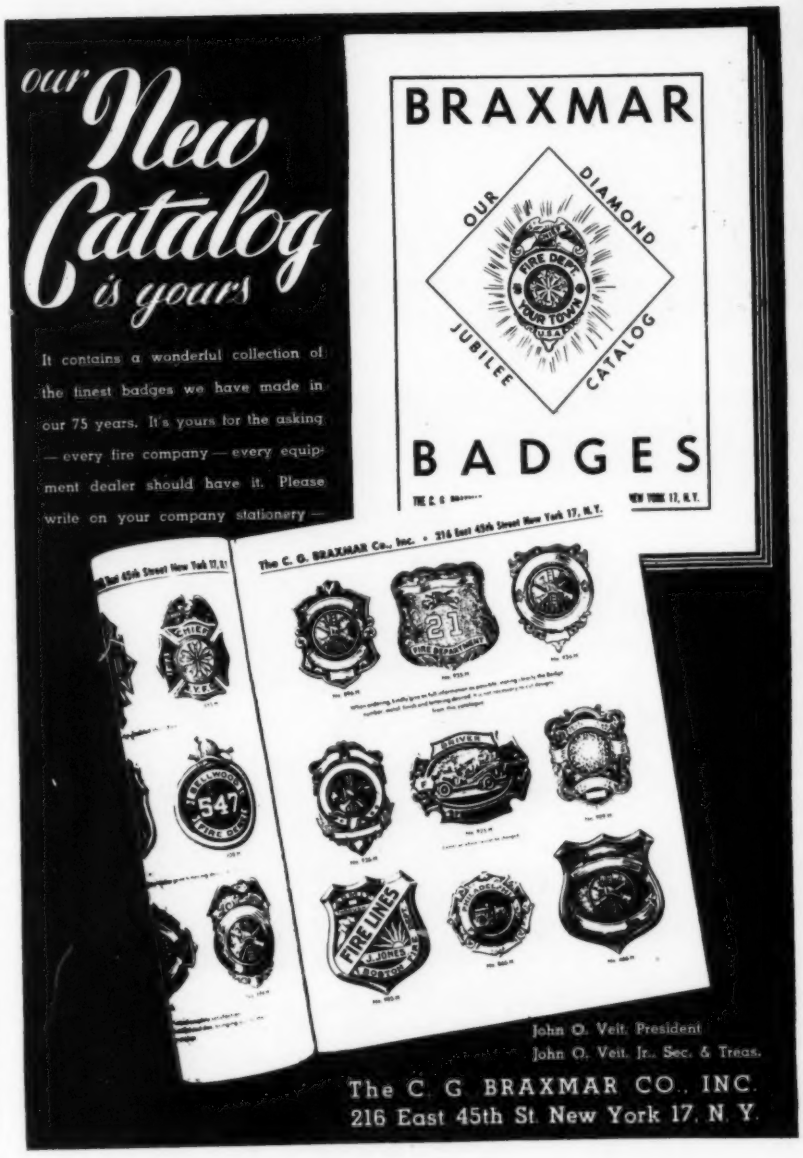
Estimated fire losses in the United States during August amounted to $107,713,000, it was reported by the National Board of Fire Underwriters.

According to Lewis A. Vincent, NBFU's general manager, this $107,713,000 loss represents an increase of 90.8 per cent over losses of $56,462,000 reported for August, 1952, and an increase of 43.7 per cent over losses of $74,938,000 for July (1953).

Mr. Vincent explained that August's fire losses were the highest on record, reflecting the loss from the General Motors' Livonia (Mich.) plant destruction on August 12.

Losses for the first eight months of 1953 now total $616,732,000, an increase of 17.9 per cent over the first eight months of 1952, when they amounted to $522,790,000.

These estimated losses include an allowance for uninsured and unreported losses.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It contains a wonderful collection of the finest badges we have made in our 75 years. It's yours for the asking — every fire company — every equipment dealer should have it. Please write on your company stationery —
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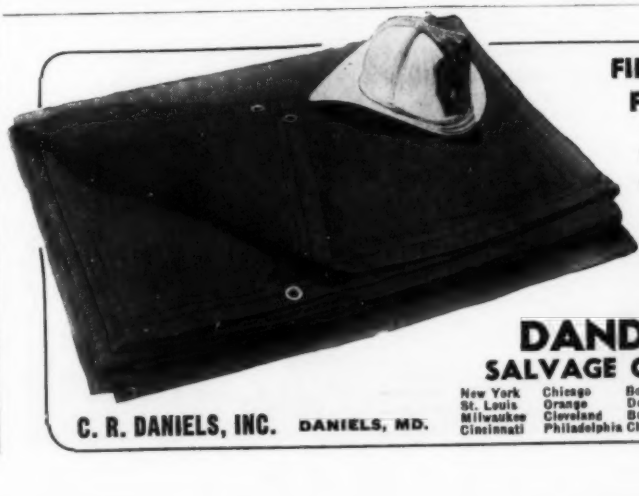
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High quality, durable canvas . . .
Light weight, closely woven . . .
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What's Burning?

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of September, 1953.

Month Ending September 30, 1953

Birmingham, Ala.—Alabama Fixtures & Frigeration Co. plant, damaged.

Birmingham, Ala.—Marks-Fitzgerald Furniture Co. warehouse destroyed.

Heflin, Ala.—Radiant Chenille Co. plant damaged.

Maricopa, Ariz.—Classroom building in this Pinal County community, destroyed. Defective wiring.

Little Rock, Ark.—Dailey's United Supply Co. building damaged.

North Little Rock, Ark.—American Excelsior Corporation's material yard, office building, storage room and garage, destroyed. Grass fire.

West Memphis, Ark.—Bacus Lumber Co. destroyed. Lightning.

Burbank, Cal.—Square block of movie sets at Columbia Pictures destroyed.

Hayfork, Cal.—W. J. Hawkins & Sons' lumber mill destroyed.

Los Angeles, Cal.—Pacific Bronze plant destroyed. Spark from motor set off paint in lacquer spraying booth.

Los Angeles, Cal.—Newly dedicated Rosecrans avenue bridge over Los Angeles River damaged. Arson.

Los Angeles, Cal.—Two dwellings on Gene Walker ranch and A & A hog ranch, destroyed. Careless hunter tossing away a lighted cigarette.

Los Angeles, Cal.—Industrial Associates, Inc.-Bonner Machine Works, Inc., defense plant in center of small manufacturing area on western edge of International Airport, damaged.

Los Angeles, Cal.—Yard of Buffalo Junk Co., adjacent foam rubber company warehouse, Thompson Machine Co. and Liberty Pipe Co. damaged. Spontaneous ignition.

Los Gatos, Cal.—Pacific Railway Signal Co.'s six buildings damaged. Railway flares.

Redding, Cal.—Darrold's Storage Warehouse destroyed.

San Fernando Valley, Cal.—Dance pavilion and main cafe at Pop's Willow Lake Resort, destroyed.

Tule Lake, Cal.—Winema Grain Elevator destroyed.

Van Nuys, Cal.—Pacific Mercury Television Co. plant and storage warehouse, destroyed.

Whittier, Cal.—"Henny-Penny" egg storage warehouse destroyed.

Bristol, Conn.—Buildings and yard of Bristol Lumber Co. destroyed.

Simsbury, Conn.—Three tobacco sheds, owned by American Sumatra Corp. in Westogue section, destroyed.

Wilmington, Dela.—Barn on Bellevue Hall Estate of William DuPont, Jr., destroyed.

Miami, Fla.—See-All Meal Co. warehouse destroyed. Explosion.

Atlanta, Ga.—Decatur Chemical Co. plant and ABC Floor Sweeping Compound Manufacturing Co., destroyed.

Stone Mountain, Ga.—Stone Mountain Elementary School destroyed. Defective wiring.

Valdosta, Ga.—Service Club at Moody Air Force Base destroyed.

Atomic City, Ida.—Barne Motel restaurant destroyed.

Irwin, Ida.—Johnny's One-Stop Station housing cafe, bar and service station on Highway 26 destroyed.

Meridian, Ida.—Grade A dairy barn and hay barn on Tom White farm, two miles south and four miles east, destroyed.

White Bird, Ida.—Ida-Pine Lumber Co. destroyed.

Chicago, Ill.—South Side tenement building destroyed. Faulty wiring.

Chicago, Ill.—Building at 3616 South State Street; communicated to building at 3614 and 3618 South State, damaged. Defective wiring.

Granite City, Ill.—Eight buildings in an outlying business and residential section, damaged.

Wheaton, Ill.—Illinois Bowl, a recreation center on Highway 24, destroyed.

Denver, Ind.—Wilkinson Lumber Co. destroyed.

Indianapolis, Ind.—Norman Vogel's Furniture Store destroyed.

North Salem, Ind.—Herbert Brownlee garage in Hendricks County, destroyed.

Des Moines, Ia.—Building housing a drug store, two taverns, men's clothing store, barber shop, beauty shop and main offices of Foxbilt Feed Co. damaged.

Newell, Ia.—Fullerton Lumber Yards, Farmers Co-op Elevator and three railroad refrigerator cars destroyed. Three teenage boys admitted starting fire by playing with matches.

Kansas City, Kans.—Building occupied by Classen-Morse Chevrolet, Inc., damaged.

Kansas City, Kans.—Safeway store destroyed.

Wichita, Kans.—Five business firms on 300 block in North Waco in central business district, damaged.

Paducah, Ky.—Fulton High School's science hall destroyed.

Russell Springs, Ky.—Bernard Motor Co. garage destroyed.

Baltimore, Md.—Millwork warehouse of Baltimore Lumber Co. destroyed.

Frederick, Md.—Tractor-trailer truck, owned by Pilot Freight Carriers, Inc., destroyed on Route 15, nine miles south. Deflated tire.

Silver Spring, Md.—Westland Printing & Stationery Co. destroyed. Discarded cigarette.

Lynn, Mass.—Warner Theatre in Union Square damaged.

Brown City, Mich.—Eureka Elevator & Supply Co. elevator destroyed.

Ferndale, Mich.—Kar-Nut Products Co. destroyed.

Milan, Mich.—Barns on Theodore Heath farm, three miles south, destroyed. Boys playing with matches.

Newberry, Mich.—Newberry City Power and Light Co. plant damaged. Overheated bearing in diesel engine touching off explosion of lubricating oil.

Saginaw, Mich.—Two warehouses owned by Howard Dos of Howard Industries, Inc., trailer makers, destroyed; office building of Parker Advertising Agency nearly destroyed.

St. Ignace, Mich.—Plane mill and sawmill of Paul Bunyan Lumber Co. destroyed. Spark from electric motor touching off dust explosion in plane mill.

Keewatin, Minn.—Cusciotto drugstore, Gentile's bar and Perry building, which contained a pool hall and general store, destroyed.

New Ulm, Minn.—Stork Bros. Product Plant destroyed.

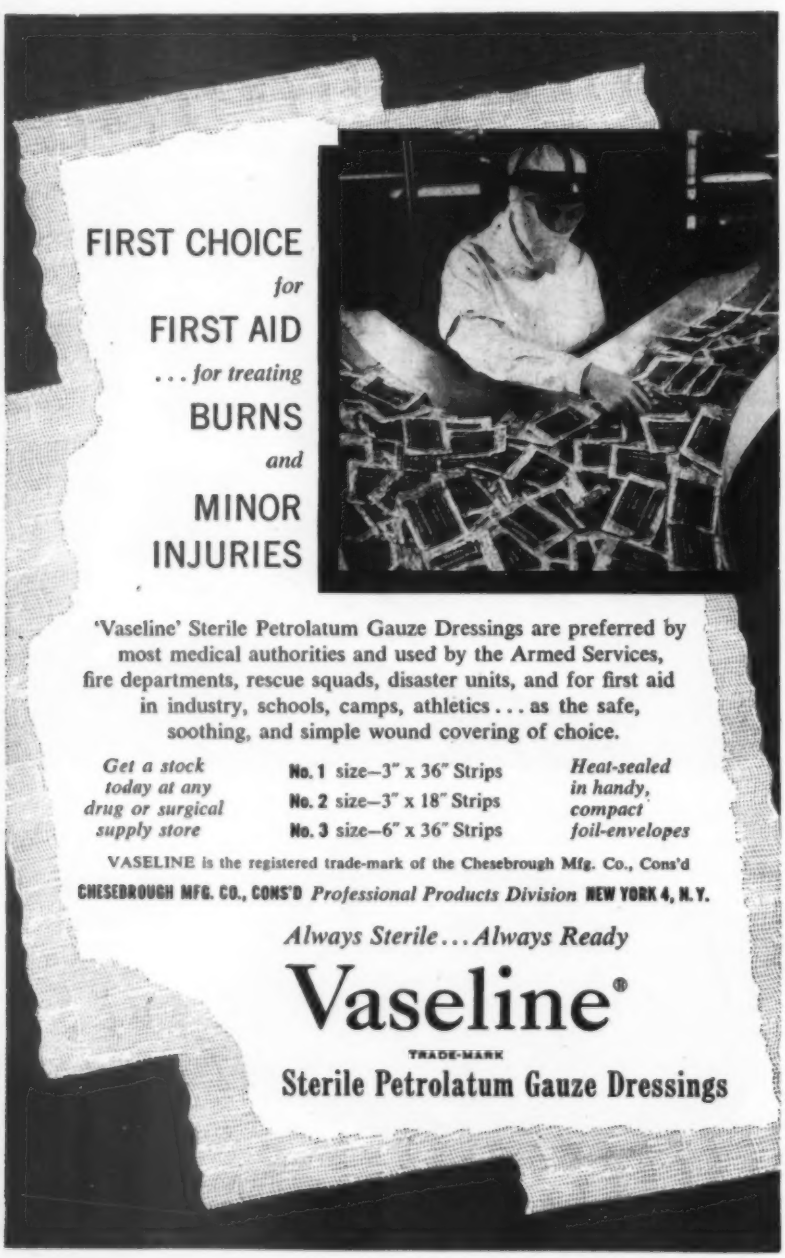
North St. Paul, Minn.—Heger Products Co. plant destroyed.

Prinsburg, Minn.—Gasoline storage tanks of John Bonnama Service Oil Co., 19 miles southeast of Willmar, destroyed. Static electricity.

St. Paul, Minn.—Lampert Lumber Co. lumber and millwork destroyed.

Worthington, Minn.—Grinding plant of Farmers Cooperative Co. elevator destroyed.

Richton, Miss.—Pettis Valley Motor Co. damaged.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Kansas City, Mo.—Dwelling of Dr. Marvin Bills destroyed.
Kansas City, Mo.—Upper part of Rev. D. A. Holmes School, formerly the Benton School, damaged. Spontaneous ignition.
Pattonville, Mo.—Building of C. C. Branneky & Sons, including grocery, hardware store and post office, damaged.
St. Louis, Mo.—Wiles-Chipman Lumber Co. and nearby Illinois Motor Express, warehouse of Jackes-Evans Manufacturing Company and State Pipe & Supply Co., damaged.
Sikestown, Mo.—Southeast Missouri Elevator destroyed.
Weston, Mo.—Stage and auditorium of West Platte R-2 District Elementary and High School destroyed.
Plains, Mont.—Plains Feed and Grain Co. elevator destroyed.
Dover, N. H.—Armour Meat Packing Plant and Warren Furniture Co. which occupied adjoining buildings in Depot Square section of city, destroyed.
Columbus, N.J.—Two barns on dairy farm of Byron E. Lippincott on Route 206, destroyed.
Lincoln Park, N. J.—Duncane Heating Corp. plant destroyed.
Newark, N. J.—Santoro Lumber Co. damaged.
South Amboy, N. J.—St. Mary's School and High School destroyed. Electrical wiring.
South Amboy, N. J.—Semer's, Inc., hardware store, destroyed.
Union, N. J.—Plant of Titanine, Inc., lacquer and paints, damaged.
Avon, N. Y.—M. C. Watkins Coal & Lumber Co.'s two buildings, destroyed.
Buffalo, N. Y.—Dold Feed Co. building destroyed.
Canastota, N. Y.—Building occupied by Canastota Fruit Co.; Canastota Savings & Loan Co.; bakery shop; beauty salon; grocery store and Marshall Hope clothing store, destroyed.
Clinton, N. Y.—Clinton Arena destroyed.
Endicott, N. Y.—J. M. Hanafin, Inc., farm equipment garage and feed store destroyed.
Ovid, N. Y.—Franklin Hotel destroyed.
Pavilion, N. Y.—Three barns on Robert Phelps farm destroyed.
Sylvan Beach, N. Y.—Lake Shore Hotel, a summer resort, destroyed.
Wellsville, N. Y.—New York Store and Stacy Confectionery, both in Applebee Business Block and adjoining W. T. Grant, Rockwell Bros. and Cannon Clothing Stores, damaged.
Beaufort, N. C.—Menhaden Fish factory on Melt Lee Island, destroyed.
Carrboro, N. C.—Main warehouse and shop building at J. B. Goldston Lumber Co. destroyed.
Charlotte, N. C.—Moskins Credit Clothing Store and Pittle's Delicatessen, damaged.
Fort Bragg, N. C.—Warehouse in Yadkin area damaged. Lightning.
Goldston, N. C.—Negro school building destroyed. Defective wiring.
Canton, Ohio—Moose building destroyed. Explosion.
Cincinnati, Ohio—Dean & Kite Co. at the foot of the suspension bridge to Covington, Ky., in downtown area, damaged.
Cleveland, Ohio—Building occupied by Euclid-55th Lumber Co., Wahl Moving & Trucking Co. and D. A. Stuart Oil Co., damaged.
Lima, Ohio—North Star Woolen Mill damaged.
Piketon, Ohio—Patterson Milling Co. destroyed.
Parkertown, Ohio—L. T. Fangboner Co. elevator, general store and dwelling, destroyed.
Shelby, Ohio—Air Force warehouse used as storage for Wilkins A. F. Base, destroyed.
Toledo, Ohio—N. L. Huss garage, State Rte. 2 and Curtiss Road, destroyed. Explosion from gasoline leaking on storage battery.
Duncan, Okla.—Masonic building also housing Duncan Business College and offices of Lone Star Gas Co., county Red Cross chapter, General Insurance Adjustment Bureau and two independent oil companies—C. V. Stinchecum Co. and Priddy Granger Oil Co.—and adjoining Safeway store, Mary Pat's dress shop, Faith Cafe, in downtown business district, damaged.
Eugene, Ore.—Bowers Seed warehouse destroyed.
Huntington, Ore.—Union Pacific Railroad's roundhouse and six steam locomotives, destroyed.
Devon, Pa.—Dwelling owned by Edward W. Shober, Jr., damaged.
Lancaster, Pa.—Conestoga Country Club bowling alley and garage in Arcade building damaged. Explosion.
Pittsburgh, Pa.—Conroy-Prugh Glass Co. warehouse in Manchester section destroyed.
Uniontown, Pa.—Victory Inn and Morris Lebowitz building damaged.
Yardley, Pa.—Barn on Augustus Leedom farm destroyed.
Providence, R. I.—Building destroyed; four others damaged. Fire threatened the entire manufacturing triangle bounded by Clifford, Dorrance and Dyer streets in downtown.
Charleston, S. C.—Isle of Palms Pavilion destroyed.
Columbia, S. C.—South Carolina Area Trade School near Columbia Airport, damaged.
Walterboro, S. C.—Cotton gin of J. G. Thompson Sons destroyed.

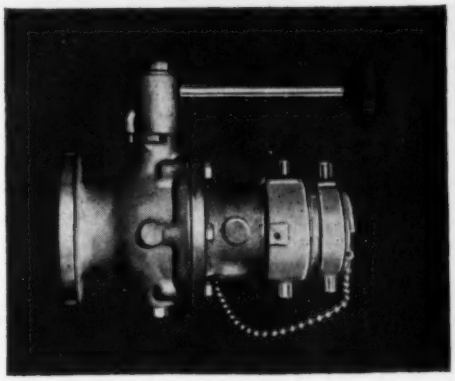
HALE TYPE "BL" SUCTION VALVES

Now Available

The Hale Ball Type "BL" Valve is now available as a Suction Valve, handy for use in pumping from hydrant or for relaying from one pumper to another.

Picture shows 2½" "BL" Suction Valve with pin-lug swivel and pin-lug plugs, with female National Standard Thread. Special threads (within range of casting) at slight extra cost.

Valve is also available with 2½" Navy-Type slotted swivel and slotted plug.



Above—View of 2½" Hale Ball-Type "BL" Suction Valve shown with female National Standard Thread and Pin Lug Plug and Chain. Plug and chain are optional.

Write today for detailed information on Hale "BL" Suction Valves. Ask for Bulletin #293.

Outstanding Features

- **Opens and closes easily at all pressures.**
- **Will hold high pressure or vacuum.**
- **Circular Venturi section through valve cuts flow loss to minimum.**
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- **Slight twist of handle locks valve into any desired position for gating.**

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Fire Pump Co.
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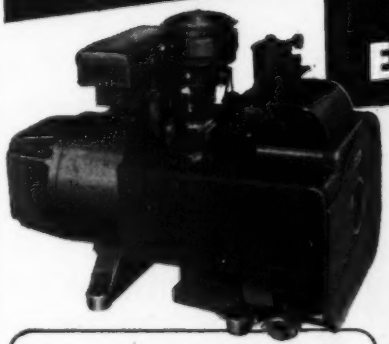
Hale Fire Pumps are built in all Standard Capacities.

The STANDOUT ELECTRIC PLANT for STANDBY ELECTRIC POWER



the New ONAN "CW"

5000, AND 10,000 WATTS

★ **COMPACT**—Requires less than one cubic yard of space. 10KW model needs only half the space of other 10KW units.

★ **BUILT FOR HEAVY DUTY**—Twin-cylinder, horizontally-opposed, 4-cycle, air-cooled engines operate at moderate speed.

★ **UNI-DUCT COOLING**—Air cools both engine and generator and is expelled through one small vent which also discharges engine exhaust.

Here's a powerhouse of emergency electricity with features and performance that make it a standout!

The CW is compact and lightweight. It's easier to install and requires a minimum of servicing. Air-cooling avoids trouble from leaking or freezing.

New vacuum cooling and the smooth-running, 4-cycle, twin-cylinder engine give the CW amazing quietness. All moving or heated parts are safely enclosed.

The Onan CW, with all its exclusive advantages, *costs less than any other complete electric plant of its capacity.*

DeLuxe equipment. Nothing extra to buy.

WRITE FOR SPECIFICATIONS

Onan ELECTRIC PLANTS

D. W. ONAN & SONS INC.

5719 University Avenue S.E. • Minneapolis 14, Minnesota

Nashville, Tenn.—Grain warehouse of Osburn-Hassey Storage Co. destroyed. Spontaneous ignition.
Nashville, Tenn.—Royal Crown Bottling Co. plant damaged.
Soddy, Tenn.—Building housing Hale Drug Co. and Home Food Store, destroyed.
Athens, Tex.—Dixie Theatre destroyed.
Dallas, Tex.—Groves Lumber Co. destroyed.
Houston, Tex.—Sheds, yards and offices of Farrar Lumber Co., Inc., destroyed.
Bennington, Vt.—Putnam Hotel, shoe store and adjoining barber shop and women's dress store, damaged.
Culpeper, Va.—Building of Waters & Co. which supplies among other products, fuel oil, coal and gas, destroyed.
Franklin, Va.—Airlane hangar of Hayes Flying Service and 17 airplanes on U. S. Route 58 in Isle of Wight County, destroyed. Several houses in nearby housing development, damaged.
Luray, Va.—Luray Home Laundry & Dry Cleaning Co. destroyed.
Moses Lake, Wash.—Lumber co. and a cold storage warehouse damaged.
Moses Lake, Wash.—Moses Lake Building Materials plant destroyed. Arson.
Moses Lake, Wash.—Potlatch Lumber Co. yards destroyed. Arson.
Okanogan, Wash.—Wildlife Clubhouse destroyed. Grass fire.
Seattle, Wash.—Pacific Highway Blockhouse Restaurant, destroyed. Grease on range.
Spokane, Wash.—Three-story Spokane building housing four firms, destroyed.
Toppenish, Wash.—Yakima Golding Hop Farms, destroyed.
Walla Walla, Wash.—Institution's metals plant at State Penitentiary, destroyed.
Princeton, W. Va.—Pepsi-Cola Bottling Co. plant damaged.
Kenosha, Wis.—Store and apartment building of Rhode Camera & Photo Supplies, Inc., damaged.
Milwaukee, Wis.—Boiler house and power plant of Milwaukee Chair Co. destroyed. Explosion.
Osseo, Wis.—High school buildings destroyed. Defective wiring.
Vancouver, B. C.—Wright's Canadian Ropes Co., Ltd. plant on congested Granville Island in False Creek, destroyed.
Winnipeg, Man.—East wing of Weston Bakeries, destroyed.
Yarmouth, N. S.—Shoe store and a small department store destroyed.
Brampton, Ont.—Buildings on Murray Laird farm, seven miles west, destroyed.
Oshawa, Ont.—Oshawa Arena destroyed.
Simcoe, Ont.—Tobacco-filled barn on Karl Wesleyan farm in Woodhouse Township, near No. 24 highway, destroyed.
Montreal, Que.—Building of Martineau Cut Stone Co. Ltd. and garage owned by Raymond McDonnell & Co., Ltd., contractors, destroyed.

Is a life worth a few dollars to you?

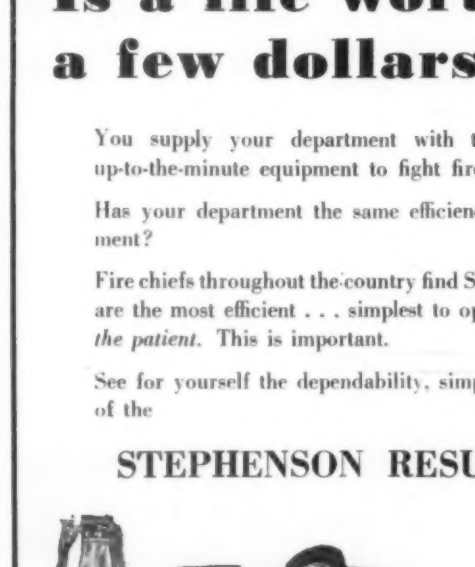
You supply your department with the most efficient and up-to-the-minute equipment to fight fires.

Has your department the same efficiency in life-saving equipment?

Fire chiefs throughout the country find Stephenson Resuscitators are the most efficient . . . simplest to operate, *and do most for the patient.* This is important.

See for yourself the dependability, simplicity and effectiveness of the

STEPHENSON RESUSCITATOR



Save Lives
Protect your Community,
Increase your Department's Reputation and Prestige with the New, Improved

STEPHENSON RESUSCITATOR

Write for Free Demonstration

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Los Angeles Fire

(*Continued from page* 930)

Jumbo Mystery nozzles, and forty-five minutes operation of Engine 21's turret were required to finally bring the main fire and all the spot fires under control. Twenty-four hours after the fire was reported, overhauling was completed, but a detail of men kept watch on the premises for an additional twenty-four hours putting out any newly-detected outbreaks.

The Fire's Potential

Had this fire from the carelessly discarded cigarette been able to conquer the Roth Furniture Company, it might have victoriously blazed its way through the rest of the block. Furniture stacked closely to the corrugated iron wall might easily have ignited. That the water curtain provided by the eighteen sprinklers outside this wall actually prevented a conflagration cannot be said. But it is safe to say, judging by the mute evidence inside, that without it Charles Roth and Sons would now be salvaging charred embers of their factory instead of water-soaked furniture. One hundred thirty-four sprinkler heads of the nearly 700 in the system ruptured, and most of these directly beneath an area in the roof where flames had licked through the charred exterior. The water curtain between the buildings had done its greatest work when it was needed—before the firefighters arrived.

Charles Roth was a firm believer in sprinkler systems. He is even more so now. He saw the ravages of this fire and afterwards commented, "Those firemen are the hardest working, most unselfish bunch of boys I ever saw." Thanks to both, Los Angeles was spared a major conflagration in one of its overcrowded industrial areas.

Although the Sterling Paper Products Fire did not mark the end of this City's worst seven day period for fires, it did add materially to the total fire losses. Losses were estimated by a local newspaper at $300,000 for the Sterling Plant, and over $10,000 to the Roth Furniture Company.

Fales Heads N. Y. State Firemen

Charles M. Fales was re-elected president of the Firemen's Association of the State of New York at its 81st Annual Convention held in Binghamton, N. Y., August 18th.

The Association, which now numbers more than 1,500 member companies and 3,600 individual members, in addition to maintaining the Firemen's Home in Hudson, N. Y., takes an active interest in promulgating the laws governing volunteer firemen in the State and in furthering work of volunteer organizations among the Boy Scout Troops and Junior Fire Companies.

Highlight of the convention was a colorful parade when over 4,000 firemen and auxiliaries from over 60 fire companies, with bands, drum corps and modern fire apparatus, paraded through Binghamton.

News of the Manufacturers

(Continued from page 940)

Onan Issues "Blue Book" on Electric Generating Plants

D. W. Onan & Sons Inc. of Minneapolis has issued a pocket sized booklet "Blue Book" of general information on engine driven electric generating plants which traces the history of electric plant development from early stages where storage batteries were necessary to today's modern single-unit, engine-generator power plants.

Described are the three general groups of electric plants: Alternating Current (A.C.), Direct Current (D.C.) and Battery Charging. The booklet also reviews the three types of generator prime movers: gasoline engine, diesel engine and gas engine. It covers cost of operation and installation; differences of engine cooling; starting methods; and gives a summary of important points to remember in selection of an electric generating plant.

Copies of the "Blue Book" are available by writing the manufacturer.

Grinnell Installs Pyrene Air Foam Systems

Air foam fire extingishing systems designed and manufactured by the Pyrene Manufacturing Company, Newark, N. J., are now offered for sale and installation through the nationwide organization of the Grinnell Company, Inc., Providence, R. I.

The non-exclusive arrangement with Grinnell does not alter the sale of Pyrene air foam systems, mobile and portable equipment through Pyrene's own district offices and air foam jobbers.

New Fire Protection Engineering Service

U.S. Fire Protection Engineering Service, Inc., has been established by a group of fire prevention and protection engineers to assist management in safeguarding lives and property from fire.

The company's headquarters are at 805 Baltimore Ave., Kansas City, Mo. The engineering staff includes trained protection engineers having specialized knowledge in architectural, mechanical, chemical and electrical engineering. Frank H. Gage is President of the new company.

Kidde Issues Extinguisher Bulletin

A new, 8-page bulletin describes all types of portable fire extinguishers for Class A, B, and C fires. The brochure also outlines smoke and temperature-rate-of-rise fire detection systems as well as automatic carbon dioxide extinguishing systems for machinery and entire rooms.

Bulletin P8R5 is available upon request from Walter Kidde & Company, Inc., Main Street, Belleville 9, N. J.

Ansul Appoints Whitford

A. J. Whitford, president of the First National Bank of Marinette, Wisc., has been elected chairman of the board of Ansul Chemical Company, of Marinette.

He succeeds Harvey V. Higley, who recently was appointed by President Eisenhower to serve as Director of the

GET TO THEM IN A HURRY!

SAVE TIME LIFE AND PROPERTY!

ARGOSY'S RECENT STORY ABOUT LADDER 26, BUSIEST N.Y.C. TRUCK:

"The most useful tool is the 'Halligan Tool'—About 30" long, it is an UGLY BAR of forged steel with crow-bar teeth at one end and a 3-sided combination hook, axe and sledge at the other end. It is used to rip open skylights, bulkhead doors, punch holes in roofs, knock down cornices, pry open doors and flooring. The thing we all like about it, says fireman Sisty, "is that it weighs only 8 pounds, can be used in a tight place and can do anything". When life is in danger—only the best is good enough!

Read what happened in BOSTON—

Boston Protective Dept., March 14, 1953—fire at 100 Chauncy St.—7 sprinklers on top floor operated—*This company opened 28 doors with this tool.* THEY PUT BACK INTO IMMEDIATE USE—WITH LITTLE OR NO DAMAGE—26 OF THOSE DOORS!

SEND FOR THIS TOOL NOW—PUT IT TO USE—AND YOU'LL SEE WHY FIREMEN EVERYWHERE SAY IT'S THE BEST TOOL YOU CAN BUY—ORDER ONE.

$36.00 F.O.B. U.S.A.

Write—**M. A. HALLIGAN** 1505 Metropolitan Ave., New York 62

1001 USES—DOES EVERYTHING—EVERYWHERE

THE HALLIGAN TOOL

TRI-LOC NOZZLE HOLDER

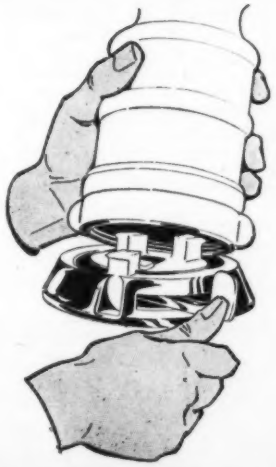


PLATE 653

Accessories easily mounted on truck and easily detached for use. Rigidity assured by three lugs. Lugs machined to pitch assuring against thread damage.

Available in 1½" and 2½" Sizes

ELKHART BRASS MFG. CO., INC.

ELKHART INDIANA

FM MASCOT

The light you can depend upon.
The only substitute for a 110 volt floodlight.
PLEXIGLASS lens, two beams, uses either 7½ or 9 volt Burgess battery.

May be ordered direct. Please include your dealer's name.

ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

WHY *Janesville* IS FIRST

IT FEATURES SAFETY FIRST
because it's . . .
"SAFETY CONDITIONED"
with
"SCOTCHLITE"

JANESVILLE fire coats, either duck or rubber, are available fully "SAFETY CONDITIONED" with properly placed "SCOTCHLITE" trim that will reflect light with dazzling brilliance on dark streets or in smoke-filled buildings.

"SCOTCHLITE" bands extend around cuffs and bottom of coat in addition to vertical strip on front flap and a horizontal band across the back.

FREE literature upon request.

Janesville APPAREL CO.
JANESVILLE, WISCONSIN

Veterans Administration. Mr. Higley will continue to serve Ansul as a director, without salary.

The company is the pioneer producer of dry chemical fire equipment and also makes refrigerant and industrial chemicals.

New Glass Fiber Fire Hose

The employment of glass fiber yarn in the manufacture of light weight fire hose was announced recently by Mr. James N. Mason, Director of Research and Development for the Boston Woven Hose and Rubber Company, Boston, Mass., manufacturers of industrial rubber products.

Crossing charged hose with heavy trailer truck to demonstrate strength of fiber glass hose.

The glass fiber fire hose is lighter than cotton hose and lighter than hose made with other synthetic fibers.

W. F. Anderson, Manager of Boston's hose sales department states that in addition to lightness and strength, the new fiber glass fire hose is more compact.

"Approved" Announces "The Chieftain Line"

Approved Fire Equipment Co., Rockville Center, New York, recently announced the new "Chieftain Line" of Underwriters' Class A pumping engines. It is built in two models: (A) Two-stage standard 750-gallon at 150 pounds, and (B) Three-stage, 600 and 750-gallon at 150 pounds. This latter unit develops 600 to 700 psi when operated at "pressure."

Both models are equipped to discharge water or fog through 2½-inch hose lines on both sides of the pump, with 2½ to 1½-inch reducers to allow discharge through 1½-inch lines. Booster tank of from 300 to 500 gallons capacity is provided.

To prevent water in booster tank from freezing while "standing by" at fire, provision is made for circulating water through booster tank and connected piping, by having pump operate at idling speed of motor.

Bodies of both models are built of No. 12 gauge steel with body sides extending from running boards to top of body and terminating in 1¼-inch round tubing.

The hose compartment floor is a removable slatted platform with air space over the tank, and the hose capacity is 1000 feet of 2½-inch with a division in the body for 300 feet of 1½-inch hose.

A valved outlet from the booster tank for filling Indian tanks is provided. The valve can also be used to drain the tank.

Additional equipment supplied with Model B includes: Two 800-pound pressure booster reels (800 psi pressure hose) top mounted in forward end of body; two high-pressure gun type fog nozzles.

Additional equipment supplied with Model A includes: Two 400-pound pressure booster reels, each equipped with 150 feet of ¾-inch hose (400 psi pressure hose) top mounted in forward end of body; two Rockwood combination straight stream and fog nozzles.

Pamphlet on Dandux Penguin Tarps

C. R. Daniels, Inc., Daniels, Md., manufacturers of Dandux "Penguin" tarpaulins has issued a new 2-color pamphlet describing and picturing its product, giving sizes and weights.

New Pamphlet Edition of Chicago Code

A new pamphlet edition of Chapters of the Municipal Code of Chicago, Ill., relating to Fire Prevention, amended to July 1, 1953, has just been published.

Important chapters in this pamphlet cover the subjects of Hazardous Use Buildings; Exit Requirements; Fire Extinguishing Apparatus; Fire Resistive Requirements; Standard Standpipe and Sprinkler Systems; Storage, handling, and transportation of flammable liquids; Garages and Filling Stations; Chemical, Drug, or Paint Factories and Stores; Dry Cleaners; Explosives and Fireworks; Fuel Oil Dealers; Lumber Yards and Storehouses, and many others.

Copies of this 236-page publication can be obtained from the Municipal Reference Library, Room 1005, City Hall, Chicago 2, Illinois. The price is $1.00.

New "Chieftain" pumper.

Hazardous Materials

(*Continued from page 932*)

amendment to the Fire Prevention Code, but we know at the start that this amendment will be defeated. We have also been very fortunate in not having any such fires, but there is no assurance that we will never have any such fire. Personally, I feel we should have restrictions by law so as to minimize the danger of such fires. Limited movement to specified streets is provided on these dangerous assignments by the Lewiston Police Department, who give us excellent cooperation. The State Fire Marshal also convoys explosives through the streets at the prescribed hours of less traffic. These streets are completely supervised and meet specifications and rulings of safety.

Fortunately we have been on the alert in the case of some small fires which could have resulted into a dangerous situation. And the lessons learned have taught us that these are problems to think about with seriousness. Similated fire drills are taught to the fire fighting personnel on locating pumpers, method of fire fighting, response to the fire, and the protection of exposures, etc.

In my opinion, the ultimate answer to this problem is to incorporate provisions in the Fire Prevention Code, limiting the hour of traffic through the city proper, convoying and escorting by police, routing through streets of less traffic, carefully inspecting trucks by the police and fire department for safety of apparatus and its fire extinguishing equipment, and checking on the reliability of the driver. This problem is of utmost importance in fire engineering and public safety, and one which lies in the province of the Fire Department.

H. J. Bohnke, Captain
Fire Prevention Bureau
Cleveland, Ohio

We have just passed a new ordinance in the City of Cleveland covering the transportation of flammable liquids, etc.

The only catastrophies that we have had were caused through unloading flammable liquids into tanks and garages where the driver left the vehicle and the liquid ran over the floor of the garage causing a fire—even though we had a city ordinance and state statute requiring the driver to stay by the motor vehicle while unloading.

It is our opinion that every driver of a vehicle transporting any flammable liquids or explosives should be compelled to have a certificate of qualification. Then, if he violated any ordinances or statutes or rules made in pursuance thereof, this certificate could be revoked, thus preventing him from being employed in that line.

G. F. Nalley
Chief of the Fire Department
Little Rock, Ark.

Trucks hauling flammable liquids must have a static chain or strap attached to the truck and dragging along the ground. All trucks must stay on truck routes.

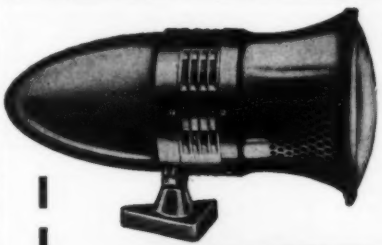
On the 15th of July, 1953, this Department answered an alarm for a fire in one of the large auto repair shops. There was a fire in a gasoline transport truck that was in the shop for repairs. The fire was caused by repairmen draining the gas from the motor tank into

PROTECTION *with Freedom of Movement*

A scientifically built safety suit with new design and construction. NOT an "asbestos suit" but a scientifically compounded garment utilizing the most modern insulators against heat, fibre glass, aluminum foil, vinyl-treated glass cloth *and* asbestos. Tested under actual field conditions in temperatures ranging from 350 deg. F. to 1800 deg. F.—with and without respiratory protective equipment. Get the I.S.S. Safety Suit that is making good in the fire service; at airports; in industry—wherever personnel must be protected against searing heat. Complete literature is yours for the asking.

Also manufacturers of protective clothing and asbestos blankets 4' x 6', packed in handy permanent carrying cases.

INDUSTRIAL SAFETY SPECIALTIES CO.
PERKASIE • PENNSYLVANIA



MODEL 20 SIRENLITE
for Emergency Vehicles

Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

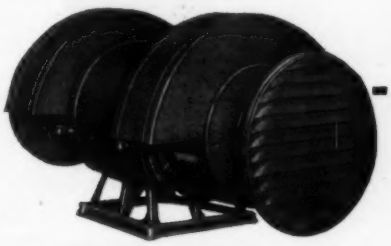
STERLING SIRENS

- **HANDSOME**
- **RUGGED**
- **RELIABLE**

Built by proud craftsmen to the highest standards of precision manufacturing . . . utilizing materials of finest quality . . . Sterling Sirens give year-after-year of unsurpassed dependability and satisfaction.

MODEL M GENERAL
FIRE ALARM SIREN
for Volunteer Systems

Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.



Complete line of Siren Equipment • *Bulletin on Request*

THE STERLING SIREN FIRE ALARM CO., INC.
10 BARTLETT ST., ROCHESTER 8, N. Y.

A New
RATCHET HYDRANT WRENCH

REQUIRES ONLY 4" SWING!

OPENS ANY HYDRANT or GATED HYDRANT

•

FASTER and EASIER to OPERATE

ACCLAIMED BY ALL

as the most practical wrench ever invented for quick service—Hydrants too near a fence, wall, utility pole or caps too close to the ground can be turned on or off in a matter of seconds.

Write for Complete Information

THE S-T HYDRANT WRENCH CO.

P. O. Box 921 HOLYOKE, MASS.

MR. FIREFIGHTER

Need Another Hand?

WHY break your neck stumbling in the dark when this light is so convenient to use and yet shines undimmed for 8 hours.

For details write to

KOEHLER MANUFACTURING COMPANY

HOWLAND PLACE

MARLBORO, MASSACHUSETTS

an open pit and the hot water tank was a few feet away.

The answer to the growing problem of fires resulting from accidents or trucks carrying flammable liquids is to have the oil and transport companies and garages instruct their men as to the dangers involved and teach them the proper methods for handling these trucks. There should be city and state laws regulating this, with close supervision by fire departments.

Joseph Zale
Chief of Fire Department
Gary, Indiana

We, in the Gary Fire Department, have always been concerned with this problem since we have the world's busiest highway running right through the heart of our city. We are neighbors to a large refinery center in Whiting and much of its products are hauled in tankers on the highway through Gary. Also, a lot of explosives are transported by truck through here.

We have no direct control over the movement of these trucks, since this is handled with the traffic problems by the traffic engineer. The problem of flammables has been discussed with him and it appears that it can best be handled on the state highway with a steady flow of traffic and less danger from intersecting traffic.

We do not limit movement to certain streets. The through streets are just more convenient to the drivers.

We have been extremely lucky in the city, but we have had some fires in the outlying sections, where we have had truck fires. For this service we have a high pressure unit that carries 600 gallons of water and this unit is equipped with turret guns with two and one half-inch spray nozzles and hand lines with spray nozzles.

The answer to this problem seems to be to reroute these flammables through a less densely populated area, if you can make these into through streets so as to lessen the danger from collision.

L. E. Halstead
Chief of Fire Department
Youngstown, Ohio

For many years the City of Youngstown failed to recognize the hazard of permitting the hauling of flammable liquids through the high value business district. Reports of serious accidents and fires in other cities from this traffic prompted me to take action, and in 1952, at my suggestion, our city council passed legislation setting up routes that must be taken by the tank trucks hauling flammable liquids, by-passing the congested areas. We are fortunate that only occasionally are explosives routed through our city. We issue permits for approved routes in the delivery of gasoline in the down-town district.

During recent years we have no accidents or fires in which this type of hauling was involved.

It is my opinion that the only way to completely overcome this problem is to construct a system of highways that will carry this through traffic around the metropolitan areas. This is being done in many places, and I hope that the arterial highway study being made here at the present time will eliminate all through truck hauling from our already overcrowded streets.

LEONARD
ROTARY GEAR PUMP

A new, better, APPARATUS PUMP!

Here's a pump you can't wear out! Delivers 150 GPM at 150 lbs. Beautifully designed and built by skilled New England craftsmen. Specify on new apparatus or use as replacement. Let us send you complete data.

National Distributor

AMERICAN FIRE EQUIPMENT CO.

717 BOYLSTON STREET, BOSTON 16, MASS.

"MORSE"
SHUT-OFF NOZZLE and PLAYPIPE
COMBINATION

•

The World's Finest

•

Fig. 156

F. N. McINTIRE BRASS WORKS

377 Putnam Ave., Cambridge 39, Mass.

1937 - - - - - - - - - - - 1953

The Round Table

(Continued from page 939)

has the same powers over fuel oil as he has over gasoline.

E. P. Feaster, Chief, Lincoln, Neb.: No coal oil, gasoline, naphtha, benzine or other like products of petroleum shall be stored in quantities of more than five gallons in the city unless the same be stored in tanks constructed of steel and coated on the outside with tar or other rust resisting material, provided that the same may be constructed of other material when set and imbedded in concrete. All joints must be tightly calked. All pipes connected with the tank shall be at the top thereof. All tanks must be so buried that no part of the top thereof shall be less than two feet beneath the surface of the ground at the point where the tank is located, and such tank shall be connected with a pump of approved pattern by means of which such coal oil, gasoline, naphtha, or other like products of petroleum shall be drawn from such tanks, and so arranged that contents cannot be taken therefrom by any other means. All such tanks shall be provided with a vent pipe. The vent pipe shall be made of one inch or larger iron or galvanized steel pipe with heavy cast iron fittings and screw joints made with litharge and glycerine and connected with the top of the tank. All such tanks must be provided with a filling pipe, the filling pipe shall be made of two-inch or larger galvanized steel pipe with heavy cast iron fittings and screw joints and made with litharge and glycerine, and no unions or flange connections will be permitted. The filling pipe shall be provided with two screens of 30 mesh brass wire, placed one at or near the tank connection and one just below the filling cock or valve; the filling pipe shall be closed at the intake by a filling cock or valve; the opening of which shall be closed by a screw cap when not in use; the filling pipe shall connect with the top and extend down to the bottom of the tank, and shall be laid at a uniform grade, so that it will drain entirely into the tank; the intake end of the filling pipe shall not be within any building and shall terminate in a covered box of heavy iron, to be kept locked when not in use.

A permit is granted by the City Council on the recommendations of the Fire Department.

No special fire protection facilities are required in buildings served by such installations.

The Chief of the Fire Department has the right to have corrections made which would control the hazards created by such installations.

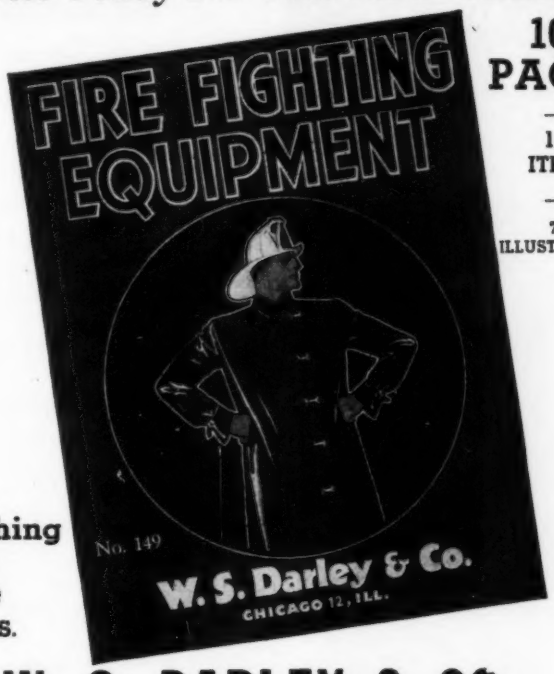
T. C. Turner, Chief, Columbus, Ga.: All our underground fuel oil tank installations are governed by the Standards set up by the National Board of Fire Underwriters covered in Pamphlet No. 31.

The Chief of Department is empowered to grant licenses or permits for such installations.

There are only two installations of underground fuel oil tanks in our high value congested districts.

William J. Coleman, Chief, Newburgh, N. Y.: This city is working under the

Write Today For This NEW Catalog



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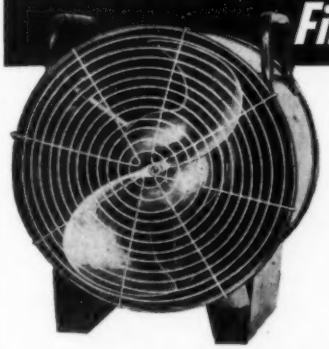
750 ILLUSTRATIONS

Everything for Fire Depts.

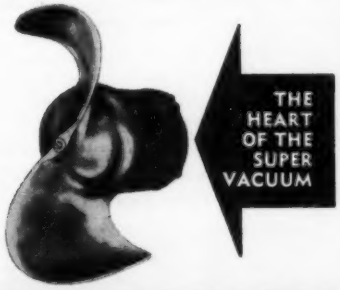
W. S. DARLEY & CO.

ESTABLISHED 1908 — CHICAGO 12, ILLINOIS

Revolutionary New Principle Increases Fire-Fighting Efficiency!



● The Super Vacuum Smoke ejector is a powerful portable fan unit designed especially for fire departments. This design is a new and revolutionary principle in moving air. Several thousand Super Vacuum Smoke ejectors are in use throughout the United States and Canada. Controlled ventilation is new and very necessary in fire fighting. Years of service and satisfied users are your best guarantee for any merchandise.



● The secret of Super Vacuum is the patented fan blade. Conventional fans chop the air and push it back. Whereas the Super Vacuum fan blade is a perfect spiral air screw which creates a partial vacuum, suction is created over the entire face of the blade and the air or smoke is discharged in a high velocity spiral. There are no dead spots—that is why Super Vacuum outperforms other fans twice its size.

Write for Additional Information or Contact Your Local Fire Equipment Dealer

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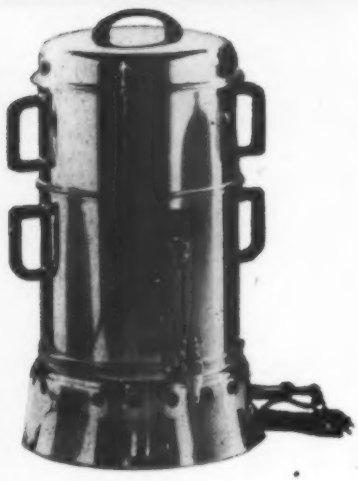
Super Vacuum **MANUFACTURING CO.**

319 East 17th Avenue • Denver 3, Colorado

THE JEWEL TEA CO., INC.
will GIVE this
48 CUP
DRIP-O-LATOR
to Your
FIRE STATION KITCHEN!



This GIFT is Yours just for introducing Velvetouch Cream Shampoo to your friends and neighbors!

Just think—for selling 65 jars of wonderful Velvetouch Cream Shampoo at $1.00 per jar—this $32.50 Electric Drip-O-Lator Coffee Maker will be given to your station absolutely Free. No filter papers, no cloths or bags are needed. This beautiful urn with the patented no-drip spigot, glass coffee gauge, and 2-way switch for keeping coffee hot for hours—makes 24, 36 or 48 cups of delicious coffee.

Over 2,000,000 Jars of Velvetouch Cream Shampoo Sold Each Year by Friendly Jewel Men

Here's a cream shampoo all the family will enjoy. Leaves the hair "squeeky clean" and wonderfully easy to manage.

Enthusiastic Report From Dixon Fire Department

Chief Gale Keyser of Dixon, Illinois says: "The people who bought our 65 jars of Jewel Shampoo are really satisfied—and we sure enjoy the fine coffee and convenience of our electric coffee urn."

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JEWEL TEA CO., Inc., Barrington, Ill.
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HERE ARE THE QUESTIONS FOR THE NEXT ISSUE

1. Is your fire alarm headquarters equipped with recorder for recording telephone and/or radio conversations?
2. In what ways do you feel that recording would prove beneficial to the fire department in connection with telephoned alarms; telephoned reports of fire hazards; apprehending the senders of telephoned false alarms; radio conversations between dispatchers and apparatus, etc.?

provisions of the 1933 Edition of the Fire Prevention Code of the National Board of Fire Underwriters. We are at the present time contemplating the adoption of the 1953 edition. We have a small Fire Prevention Bureau and enforce all of the code's provisions relative to underground fuel oil tanks.

W. H. Ferguson, Chief, Edmonton, Alta.: Top of tank must be three feet below grade level. Distance from buildings to nearest portion of tank varies from five feet to 50 feet according to capacity. Same distance applies also from property boundary to nearest portion of tank. No storage tanks can be constructed in buildings.

Application for installation is submitted and if approved, is inspected before filling in.

All buildings must provide fire extinguishers.

The Fire Chief determines restrictions in heavily populated or congested areas as per authority under fire by-laws. If a storage tank is found to be leaking such tank is immediately removed.

James A. Devlin, Chief, Chester, Pa.: Underground tanks must be buried lower than the nearest basement within 150 feet.

Licenses, or permits, for such installations are granted by the Pennsylvania State Police, Bureau of Fire Protection for tanks holding over 3,000 gallons.

F. R. Dimond, Chief, Hutchinson, Kans.: Fuel oil tanks are installed underground in accordance with NBFU Pamphlet 31, September, 1951, edition. Permits are issued by our Building Department and licenses are issued by our City Clerk's Office.

According to our codes the Chief or his bona-fide agent can make regulations in any emergency that is not covered by code.

Francis J. Dagon, Chief, East Hartford, Conn.: We have an ordinance regulating oil burning equipment and fuel oil storage. Sections pertaining to the storage of oil in underground tanks are given below:

Section 6. All applications for permits for the keeping, storage and use of oil in buildings in connection with light fuel oil heating apparatus shall be made in writing to the chief of the fire department in such form and detail as he shall require. The chief

The new improved model MEMCO AERIAL LADDER is an economical all-metal ladder unit designed to be installed on existing truck or to be installed on new equipment by your fire truck manufacturer. Electrically raised and lowered by power from the truck battery.

For details write . . .

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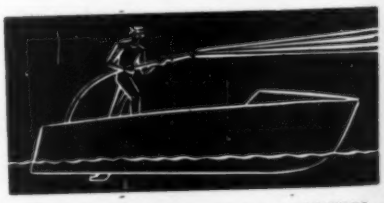

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This amazing new propulsion unit has been developed to propel craft without a propeller or rudder by taking water from outside the boat and discharging it as a high speed jet stream under the stern. A simple connection provides a high or low pressure water stream for fire fighting using standard hose. A Hydrojet powered boat operates efficiently in shallow water, in silt, debris, and in areas where ordinary fireboats cannot operate.

For further details and specifications write to—

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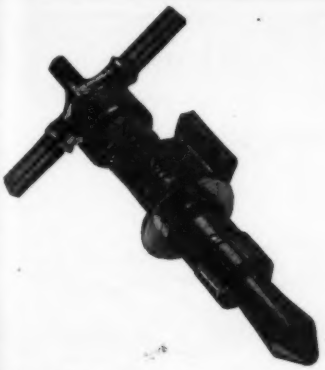
A subsidiary of Barion Steel Corp.



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Greater Expansion Greater Economy
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Dayton Fire Equipment Co.
1242-48 W. 2nd St., Dayton 7, Ohio

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We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any fireman can have a catalog by writing—

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of the fire department shall forthwith make an inspection of the premises proposed for such installation.

Section 7. Any permit or approval by the chief of the fire department may be revoked or suspended by him for cause, subject to appeal as hereinafter provided.

Section 22. Tanks having a capacity of more than 1,000 gallons may be located inside of buildings, provided that they are placed so that the top of the tank shall not be less than twelve inches below the surface of the cellar floor. Or such tanks may be located underground, outside of buildings provided that they are placed so that the top of the tank shall not be less than twelve inches below the surface of the ground. Oil shall be drawn from such tanks whether located inside or outside of buildings, by means of a pump with suction pipe draughting through the top of tank.

Section 23. All tanks for the said purpose shall have a filler pipe extending from the tank to a point outside of the building near the grade of the surrounding land, convenient for filling and be kept properly capped when not in use. They shall also have a vent pipe of not less than three-quarters of an inch in diameter, extending from the tank to the outside air, terminating in a return bend, 8 feet or more above the surface of the ground, the opening of which shall be covered with 30-mesh brass wire screen.

Section 24. All tanks for use in connection with light fuel oil burners, providing for gravity, siphon or pressure flow of oil to an automatic device shall be equipped with a lever type gate valve with a weighted arm or other approved valves located on the feed pipe and held open by a fusible link so arranged and located that the oil will be automatically shut off befor the tank can be subjected to undue heat. The said shutoff valve shall be so arranged that it can be operated manually if necessary. All tanks located outside of buildings shall be equipped with a manually operated shut-off valve, located in an easily accessible position, outside of the buildings, near the tank. All shutoff valves shall be plainly visible and labelled with a red tag, not less than two inches in width and four inches in length, printed on both sides with the words, "OIL SHUT-OFF"—or some similar identification approved by the chief of the fire department.

Frank Briers, Chief, Victoria, B. C.: The installation of underground tanks is covered by our Fire Prevention By-Law No. 3434. Some of the provisions referring to these tanks follow:

89. Underground tanks, designed or used for the keeping or storing of inflammable liquids shall be located, constructed, installed, and maintained in accordance with the following provisions:

(1) No person shall construct or install any underground storage tank for the storage of gasoline without first obtaining the approval of the Council and a permit from the Chief of the Fire Department. Such permit shall not authorize the work, until all fees as levied by this By-Law in connection therewith, have been paid.

(2) No underground tank used for

(*Continued on page 972*)

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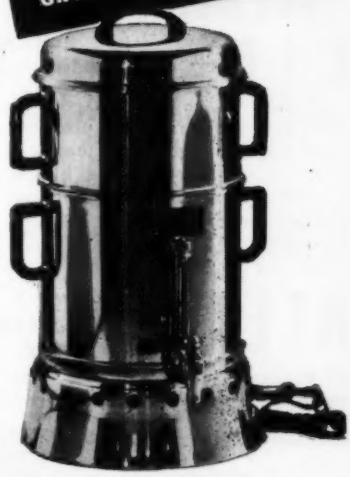
THE JEWEL TEA CO., INC. will GIVE this

48 CUP DRIP-O-LATOR

to Your GROUP or ORGANIZATION



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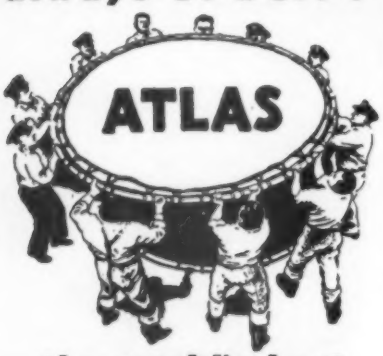

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Short Cuts and Gadgets

"SHORT WATER" EXTINGUISHING DRILLS

Haddon Fire Company of Haddonfield, N. J., has been holding weekly drills on the problem its members hope they will never have to face. That is the headache of where to get water in case of fire emergencies.

The drills have been concentrated on the Evans and Hopkins ponds in Haddonfield, and the Cooper River, from which firemen are practicing drafting water.

The practice follows a system somewhat similar to one used in Haddonfield in the past, when that community was served by about a dozen "fire wells."

Only one of the ancient cisterns is known to exist now, and it is dry. But once upon a time firemen pumped water out of it to fight fires. The now dry hole is guarded by an oversize square cast-iron cover.

The Haddon lads are not the only vamps who are trying to increase the number and size of fire wells, ponds and other sources of water. However, they show a lot of ingenuity in tying in their practice runs with the search for, and use of, such water supplies.

* * *

BIT OF GOOD ADVICE FROM BRITISH COLUMBIA

This, copped from the September, '52 British Columbia Fire Marshal's bulletin, is worth passing along. It was headed "OLD MAN WINTER! SUGGESTIONS RE FIRE APPARATUS AND EQUIPMENT." It went on to say—

"BRRR!!! Winter will soon be upon us, and with it the possibility of frozen tanks, frozen pipes, extinguishers and whathaveyou. Now is a good time to check the equipment—it's no fun at 20 deg. below.

Drain the booster hose and leave the nozzle in the open position; check the pipes to see there are no sags that may form traps for water that can freeze; prepare your water type extinguishers if you plan on using anti-freeze; prepare the fire-hall (station to most U.S.A. firemen) so that the apparatus has a reasonable chance of starting.

There are many other preparations that can be made, the item concludes, each differing as to the locality and the expected usual weather conditions, but whatever they are, prepare NOW.

* * *

AN IDEA FOR A "BUTTING BAR"

John F. Martyn, Assistant Chief of the Jamestown, N. Y., Fire Department comes up with this "gadget" and it's worth passing on to the field.

It is called a "butting bar" and is used to facilitate the butting of multi-section ladders when they are raised, and also in handling a ladder after it has been raised.

The Jamestown Department has been trained to use the last rung on the ladder for butting purposes and this has worked satisfactorily in the past. However, on the new ladders which the Department has recently purchased—and especially the 3-section metal type—they have been so constructed that the last rung on the lower section cannot be conveniently used for butting because the rung is covered by the middle section, and in addition the rungs are a considerable distance off the ground.

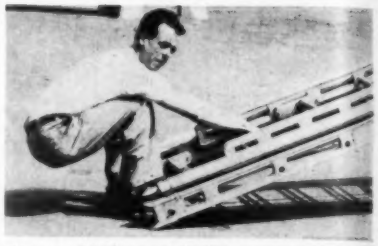

FIG. 1—Method of butting ground ladders adopted by the Jamestown Fire Department, using improvised butting bar.

FIG. 2—Showing butting bar installed. Note how the last rung on this type multi-section ladder normally used for butting, is covered by the other sections.

Because of these conditions, Chief Martyn devised this inexpensive method of placing a butting bar on the bottom of the ladder, as shown in the illustrations. The bar is merely a piece of ½-inch galvanized pipe, placed about 5 or 6 inches from the bottom of the ladder. The last rung on the ladder is approximately 14 inches from the bottom and, being a 3-section ladder, it is covered by the upper sections.

* * *

MORE ON RADIO INSPECTIONS

We've harped strongly on the value of 'radio inspections' and we're pleased to note the increasing use of fire department radio to that end.

Latest evidence comes from Berkeley and Pasadena, Calif., where extensive fire prevention programs have been launched, spear-headed by radio inspections.

In these cities, entire fire companies are assigned to do inspection work and at the same time be available to answer an alarm received over the F.D. two-way and three-way radio.

A big-little difference between these programs, and other radio-inspection plans is that the procedure is made to pay profits in building good public relations. Large signs on the apparatus engaged in inspections let the public know that the companies are out on inspection duty and not on fire call (but they are "in service").

"ATOMIC" ROCKET SIREN

WITH 360 DEGREE FLASHING

RED LIGHTS

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The most effective warning signal you can get! Assures safety for your men and vehicles.

OTHER SIZES & STYLES

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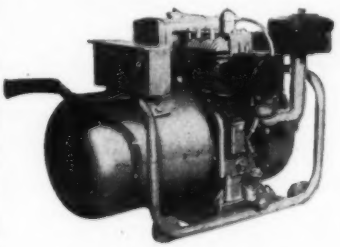
NEW . . . 2000 WATT FIRE DEPARTMENT ELECTRIC PLANT



Designed for operating floodlights, radio, pumps or blowers. Two men can carry it—and one man can wheel it around! 2000 watt 115 volt, A.C. Takes little space on the truck . . . only 22 x 18 x 20 inches high. Write for information on this and other Electric Plants built by "U.S." for fire department use.

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. . . AND MORE ABOUT SANDERS

That item in the April issue *"Should Fire Trucks Have Sanders"* appears to have struck more "pay dirt." Here's another Reader who wastes no time to point out that sanders are no mere "gadgets" but the real McCoy. We quote Fire Chief Murray of the Weymouth, Mass., Fire Department:

"All engine and ladder trucks of the Weymouth Fire Department are equipped with sanders. We have had them for the past five years. We do not consider them as in the 'gadget' class in areas subject to sleet and freezing temperatures. The sander is good insurance against sudden sleet storms or glazed road conditions. We do not intend them to take the place of chains under all conditions.

"We have found that they are of great economical value. Prior to heir installation, we used to have to keep chains on after all main and most other streets were bare of snow and ice, simply because of four or five particular streets which seem to remain icy after all others are clear. The result was that we were wearing out sets of chains on the bare roads while not receiving any calls for the streets requiring the continued use of the chains.

"The installation of the sanders now permits us to drop the chains sooner than we ordinarily would. We have saved the cost of many sets of chains and also many damaged mudguards because of the sanders."

Thank you Chief Murray!

* * *

LOCATING BASEMENT DRAINS

Nearly every fireman has at some time experienced the annoying experience of trying to locate a basement submerged floor drain.

An idea we saw in a safety publication might well be recommended in every community, to help solve this problem.

It consists in tacking the lid from a tin can (or any other kind of indestructible marker) to a ceiling joist or the ceiling itself, if finished off, directly over the floor drain opening. No more feeling around with the feet, or groping with submerged hand and arm.

If desired, the indicator could be labelled "DRAIN Immediately BELOW."

Still another idea is to tack a sign near the basement entrance giving simple measurements and instructions on how the drain can be located.

* * *

The Old Timer Says—

I've always wondered why it was that there's no standard law or regulation to compel householders, or other property owners, to indicate somewhere on the premises or structure involved, just where the electrical switch, water valve, gas line and oil shut-offs are located.

I guess every chief has run into a fire where valuable time was lost while men groped and fumbled around for the water shut-off or main electrical switch. Sure, I know some local codes call for outside oil shut-offs, but even under these conditions, firemen gotta hunt all around the place for the "instructions" and meanwhile trouble keeps a brewin'.

As for the public knowin' about such instructions and locations, they needn't be told—as long as the fire fighters have a record of the locations.

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Through continuous research and in cooperation with fire and safety officials, we have perfected a dependable home fire alarm system. It is a great satisfaction to know that our efforts have been responsible for saving many lives in fires.

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City..... Zone.... State.....

The Round Table

(*Continued from page 969*)

keeping or storing of Class 1, 2, or 3 inflammable liquids shall have a capacity of more than three thousand gallons; and it shall be located not less than three feet from any other tank containing Class 1, 2, or 3 inflammable liquid.

(3) No underground tank used for the keeping or storing of Class 4 inflammable liquids shall have a capacity of more than six thousand gallons, and it shall be located not less than three feet from any other tank containing inflammable liquid.

(4) No tank for the storage of inflammable liquids nor any filling pipe, vent pipe or other connection thereto shall be placed or located on any street, lane, or other public place unless and until permission of the City Council has been obtained and plans showing location and type of construction shall first have been approved by the Chief of the Fire Department and City Engineer and the terms and conditions under which such tank and connections may be installed shall be agreed to by the applicant.

90. (1) Except as provided in the preceding section, the limit of individual tank capacity permitted shall be dependent on the class of inflammable liquid to be kept or stored in such tank and on the location of the tank with respect to adjacent buildings and lots as follows:

Maximum Capacity of Tanks for Underground Storage Location.

If top of tank is above the lowest floor, basement, cellar, or part of any building which is less than 10 feet away, 550 gallons of Class I, II and III under 100 degrees F. flash point may be stored and 50,000 gallons of Class III above 100 degrees F. flash point; if ten to twenty feet away, 2000 gallons of Class I, II and III under 100 degrees F. flash point and 75,000 gallons Class III above 100 degrees F. flash point; if 20 to 25 feet away, 5,000 gallons Class I, II and III under 100 degrees F. flash point and 100,000 gallons Class III above 100 degrees F. flash point.

(2) No tank containing inflammable liquid shall be buried less than four feet from any building within the city; provided, however, that any tank fittings connected therewith shall in no case extend beyond two-thirds of the available sidewalk width, as determined by the City Engineer, except in such cases where special authority therefor is obtained from the City Engineer to exceed such limit on such terms and conditions as shall be imposed by the said Engineer, but subject always to approval of the Fire Marshal.

(3) If the top of the tank is above the lowest floor, basement, cellar pit of any such building or any depression or excavation in the ground, the distance as above required shall be increased fifty per centum, and be in all cases subject to approval of the Fire Marshal.

91. (1) In no case shall any underground tank for the keeping or storing of Class 1, 2, or 3 inflammable liquid under one hundred degrees Fahrenheit flash-point be located underneath any building or within the enclosing walls of any building. Underground tanks for the keeping or storing of Class 3 inflammable liquids may be located underneath a building if placed below all portions of the basement or cellar floor of such building, but such tank shall be limited in capacity, according to its location, in respect to other buildings as hereinbefore provided; provided, however, that when the installation of any such tank, or any piping of equipment connected therewith, involves or affects the structural features of any building, the Building Inspector of the City shall approve the plan before the installation is made or a permit issued therefor.

(2) Except as hereinafter otherwise provided, underground tanks shall be so buried in the ground that there will be at least three feet of earth around the entire tank, and so that the top of the tank shall be lower than any pipe in the oil plant or system not provided with an approved anti-syphoning device; provided, that where it is impracticable to provide three feet of earth over the top of an underground tank, the Chief of the Fire Department may permit, in lieu thereof, that the tank be buried under eighteen inches of earth and a cover of reinforced concrete at least nine inches thick, which shall extend at least one foot beyond the outside line

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Mechanical Foam playpipes (Leading Manufacturer) w/adapter (Cost $40.00 each) ..... $8.50 ea.
2½" nozzle holders ..... $ .95 ea.
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FIRE ALARM SYSTEM SUPERINTENDENT: 30-40, responsible supervisory work in the operation, maintenance, and repair of a municipal fire alarm and signal system. Salary $4680-$5304 per year. Complete details by writing to Director of Personnel, Municipal Building, Hartford, Conn.

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First line fire apparatus manufacturer doing nation-wide business has several open territories. Write at once qualifications, experience and desired territory. Box 85, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

WANTED TO BUY

Approximately four old leather fire buckets, sample of leather fire hose, old fire axe, trumpet, ratchet type fire alarm. Box 80, FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

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American LaFrance, City Service Fire Truck, 1927. Excellent condition. 750 gal. Pump and 215 ft. Ladders. Write ATLANTIC HOOK & LADDER CO., 25 Carlton Ave., Port Washington, N. Y.

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Sealed Bids received Oct. 27, 1953. 1927 Seagrave Double Bank City Service Ladder Truck, fully equipped. A-1 Condition. Inventory available. May be seen in Greenwich F. D. Headquarters.

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of the tank in all directions. Such concrete slab or cover shall be set on a well-tamped earth foundation. Whenever necessary, underground tanks shall be securely anchored or weighted in place to prevent floating or moving; provided, however, that any such tank having a maximum capacity of not more than one hundred gallons may be buried under twelve inches of earth covering where, in the opinion of the Chief of the Fire Department, the same can be installed without endangering surrounding property.

(3) Underground tanks shall be set on a firm foundation and surrounded with soft earth or sand, well tamped in place or water back-filled.

F. L. Crouse, Chief, Huntington, W. Va.: The only think we do is to try to have them installed according to the standards of the National Board of Fire Underwriters and the State.

The Mayor and the Chief of Police grants licenses and they are issued from the Clerk's Office:

Our powers over this type of installation are very limited.

In my opinion, this is one of the worst hazards the fire departments have to contend with today.

J. P. Caldwell, Chief, North Little Rock, Ark.: The City has put me in full charge of installing tanks underground. Tanks must be set 3½ feet underground. They must be vented. Where there is any excuse to drive near or over tank, a six-inch slab of concrete must cover same; otherwise, the tanks should be cleared or enclosed by a railing.

The fire chief has the power to grant permits.

A brick or masonry wall eight to 12 inches thick must surround tank.

* * *

The following replies are in answer to a previous Round Table on space heaters.

George A. Cavanaugh, Chief, Amherst, Mass.: We have not had any fatalities from fires caused by oil stoves.

We inspect these units.

The enforcement of the rules and regulations of the Department of Fire Prevention of the Department of Public Safety governing these installations would, in my opinion, help to reduce the number of these fires. I believe the cooperation of the installer and the residents in observing these rules should be sought. While some have been negligent in this regard, the number has not been great and consequently, we have had little trouble.

Wally Paddock, Chief, Caldwell, Ida.: While we have had fires caused by oil heaters, we have had no fatalities.

We have no control over the use or maintenance of oil stoves except with regard to flues in new homes.

I believe conscientious oil dealers and education by appliance dealers will help to reduce the number of fires from these units.

Forest Egleston, Chief, Jamestown, N. D.: We have had several fires caused by oil heaters, but no fatalities.

We have a city ordinance regulating the installation and use of these units. We also make home fire inspections after installation.

I believe education of the public in the way of fire prevention talks to P.T.A. groups, clubs, schools, etc., will help to reduce the number of these fires.

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OCTOBER, 1953

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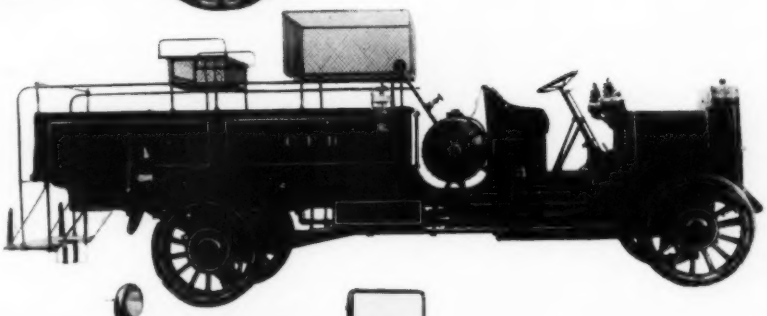
CHICAGO

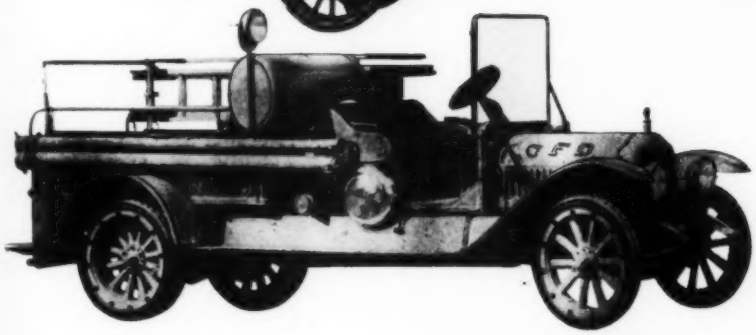
1907

27 Pirsch Horse Drawn Hose Wagons built for Chicago.



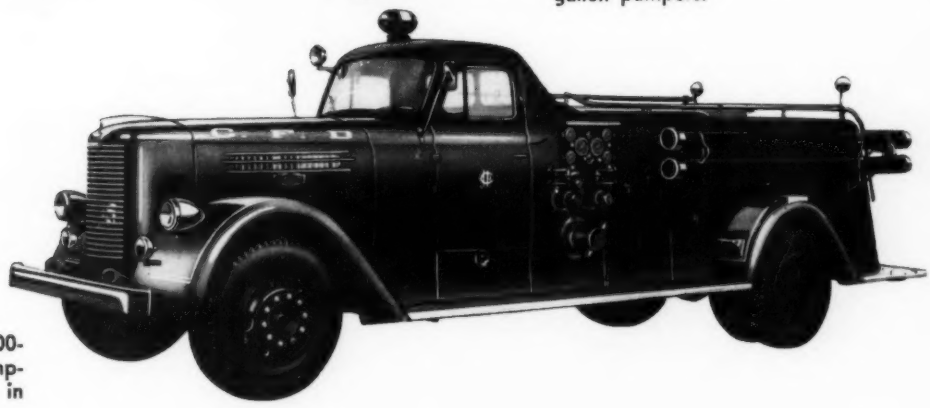
1912

3 Pirsch equipped motorized chemical and hose cars; first motorized apparatus in Chicago Fire Dept.



1916

2 Pirsch equipped 600-gallon pumpers.



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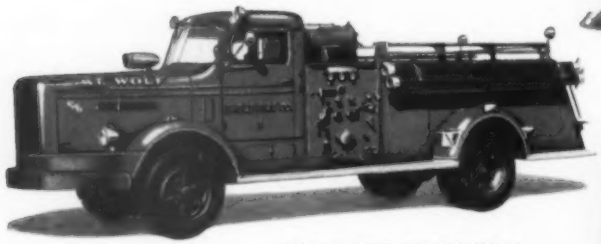

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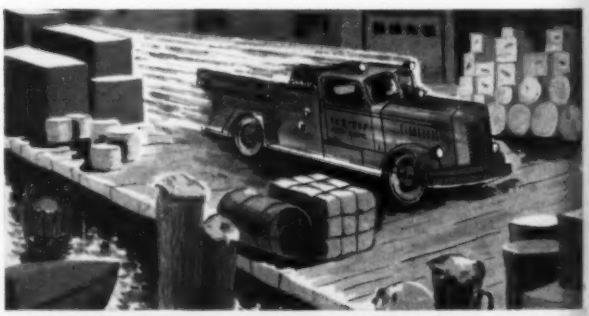
True four-wheel-drive engines help you *fight fires faster, safer, more efficiently.* Not an instant wasted out of the station; slam your accelerator down to the floor for that turn out of the doors . . . let that siren howl as you whip 'er through traffic at top speed! Greater controllable traction—with four wheels powered *all* the time—takes you 'round tight turns *with safety*, keeps you *on the road* in foulest weather. FWD power-weight proportion gets you through "impossible" terrain—mud, sand, snow, steep grades no obstacle! Find fires fast, get water where it's hard to reach, give your crew the finest back-up for skill and courage. . they *deserve* it—*and they get it, in FWD engines!*



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